

April 10, 2017

Ruth Welch, State Director
BLM Colorado State Office
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Lakewood, Colorado 80215-7093
Hand delivered

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:27

RE: Formal Protest of June 8, 2017 Oil and Gas Lease Sale

Dear Director Welch:

Please accept and fully consider this timely protest of BLM Colorado's June 2017 oil and gas lease sale. This protest challenges BLM's Environmental Assessment, DOI-BLM-CO-NO5-2016-0099-EA, and the agency's decision to proceed with the sale of new leases located in the Kremmling and White River Field Offices. We specifically protest parcels:

| | | |
|-----------------|-----------------|-----------------|
| COC78361 (6560) | COC78345 (7872) | COC78288 (7821) |
| COC78365 (6571) | COC78346 (7873) | COC78289 (7822) |
| COC78360 (7096) | COC78367 (7890) | COC78290 (7823) |
| COC78347 (7097) | COC78362 (7891) | COC78291 (7824) |
| COC78348 (7098) | COC78363 (7892) | COC78292 (7825) |
| COC78349 (7099) | COC78368 (7893) | COC78293 (7826) |
| COC78356 (7105) | COC78369 (7902) | COC78294 (7827) |
| COC78357 (7107) | COC78370 (7904) | COC78300 (7835) |
| COC78358 (7108) | COC78315 (7814) | COC78301 (7836) |
| COC78350 (7109) | COC78314 (7816) | COC78302 (7838) |
| COC78351 (7110) | COC78284 (7817) | COC78303 (7839) |
| COC78352 (7111) | COC78285 (7818) | COC78304 (7840) |
| COC78359 (7124) | COC78286 (7819) | COC78295 (7852) |
| COC78282 (7866) | COC78287 (7820) | COC78296 (7857) |

This protest is submitted on behalf of The Wilderness Society, Conservation Colorado and Rocky Mountain Wild. The undersigned groups previously submitted comments in September and December of 2016. In earlier comments we raised issues related to the appropriate level of analysis for these new proposed lease parcels, as well as issues related to specific values that must be considered and protected, and concerns about the adequacy of existing programmatic plans.

PROTESTING PARTIES

The Wilderness Society ("TWS") has a long-standing interest in the management of Bureau of Land Management lands in Colorado and engages frequently in the decision-making processes for land use planning and project proposals that could potentially affect wilderness-quality lands and other important natural resources managed by the BLM in Colorado. TWS members and staff enjoy a myriad of recreation opportunities on BLM-managed public lands, including hiking, biking, nature-viewing, photography, and the quiet contemplation in the solitude offered by

wild places. Founded in 1935, our mission is to protect wilderness and inspire Americans to care for our wild places.

Conservation Colorado is a grassroots organization working to protect our air, land, water, and people. We have a long and successful history in Colorado of collaborating on the key environmental issues of the day, and establishing strategic partnerships to find conservation success at the state and federal levels. Our organization has a long history of working on public lands issues across Colorado, but specifically on BLM lands on Colorado's western slope. Among our thousands of members are those that live, work, recreate and enjoy the BLM lands of the Kremmling and White River Field Offices for a wide variety of activities and have a vested interest in the management of those lands.

Rocky Mountain Wild ("RMW") is a non-profit environmental organization based in Denver, Colorado, that works to conserve and recover the native species and ecosystems of the Greater Southern Rockies using the best available science. RMW has a well-established history of participation in BLM planning and management activities. RMW works to save endangered species and preserve landscapes and critical ecosystems. It achieves these goals by working with biologists and landowners, utilizing GIS technology to promote understanding of complex land use issues, and monitoring government agencies whose actions affect endangered and threatened species. RMW's members and supporters include approximately 1,200 outdoor enthusiasts, wildlife conservationists, scientists, and concerned citizens across the country.

RMW's staff and members visit, recreate on, and use lands on or near the parcels proposed for leasing. Our staff and members enjoy various activities on or near land proposed for leasing, including viewing and studying rare and imperiled wildlife and native ecosystems, hiking, camping, taking photographs, and experiencing solitude. Our staff and members plan to return to the subject lands in the future to engage in these activities, and to observe and monitor rare and imperiled species and native ecosystems. We are collectively committed to ensuring that federal agencies properly manage rare and imperiled species and native ecosystems. Members and professional staff of RMW are conducting research and advocacy to protect the populations and habitat of rare and imperiled species discussed herein. Our members and staff value the important role that areas of high conservation value should play in safeguarding rare and imperiled species and natural communities, and other unique resources on public land.

STATEMENT OF REASONS FOR PROTEST

I. BLM has failed to consider a reasonable range of alternatives.

NEPA requires that BLM analyze in detail "all reasonable alternatives." 40 C.F.R. § 1502.14(a). The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." New Mexico v. BLM, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice between the spectrum of reasonable options. The Environmental Assessment (EA) for the June lease sale fails to meet this requirement. It only analyzes two alternatives:

- The No Action alternative, which would defer all lease parcels; and
- Leasing “all 106 nominated parcels available for leasing” under the governing resource management plans (RMPs), totaling 101,031 acres (the Lease Everything Alternative).

EA at 11. The EA also lists a “Preferred Alternative,” but it does not substantively differ from the Lease Everything Alternative. The Preferred Alternative would drop 215 acres from the 101,000-plus acre sale (0.2% of the total). EA at 11-12. But it does so because additional analysis revealed that those 215 acres are located within one mile of Greater Sage-Grouse leks and thus are closed to leasing under the Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendment of 2015. EA at 4, 12. Thus, the Preferred Alternative – like the Lease Everything Alternative – would offer every nominated parcel that is legally available for leasing. The “Preferred Alternative” is really nothing more than a minor correction to the Lease Everything Alternative.

An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. The “all or nothing” approach taken by the EA sharply contrasts with other recent NEPA documents prepared by BLM for comparable leasing decisions in Colorado. For example, in 2016 BLM addressed 65 existing leases on the White River National Forest – a decision which covered 80,380 acres, an area considerably smaller than the 101,000 acres here – with an EIS that analyzed six alternatives in detail. BLM, Previously Issued Oil and Gas Leases in the White River National Forest, Final Environmental Impact Statement at 1-5, 2-1 to 2-2 (Aug. 2016) (WRNF FEIS). Similarly, BLM’s 2016 supplemental EIS for the Roan Plateau Planning Area covered only 73,800 acres, but considered nine separate alternatives (including those from the 2006 EIS). BLM, Roan Plateau Planning Area Record of Decision and Approved Resource Management Plan Amendment at ES-1, 1-11 to 1-13 (Nov. 2016) (2016 Roan Plateau ROD). These examples illustrate how grossly inadequate the two alternatives are in the EA for this lease sale.

BLM must consider reasonable alternatives that fall between the two extremes. In particular, it should analyze in detail an alternative that would not lease the parcels in Grand County, which total approximately 27,500 acres. Failing to analyze such a middle-ground option would violate NEPA. See TWS v. Wisely, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider “middle-ground compromise between the absolutism of the outright leasing and no action alternatives”); Muckleshoot Indian Tribe v. US Forest Serv., 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it “considered only a no action alternative along with two virtually identical alternatives”).

Eliminating the Grand County parcels is plainly a reasonable alternative. BLM expresses doubt about whether these will ever be developed. See, e.g., EA at 63 (none of parcels are in “high potential” areas for mineral development).¹ If so, and BLM expects these leases will never produce, there is no reason to offer them – especially given that the agency will be offering more than 70,000 acres in other parts of Colorado at the June lease sale. If the parcels are not

¹ According to Colorado Oil and Gas Conservation Commission records, there is currently no oil and gas production, and no pending or approved applications for permits to drill, in Grand County. See <http://cogcc.state.co.us/data.html#/cogis> (production data by county); <http://cogcc.state.co.us/permits.html#/permits> (pending or recently-approved applications); see also EA at 64 (no producing or shut-in wells in Grand County).

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developed, leasing them offers little benefit because they will generate no royalties, and no significant additional employment or investment in the area. Moreover, the bonus payments and rentals from such leases will likely be minimal. There is simply no legal requirement or other reason to offer these leases if BLM does not expect them to be developed.

On the other hand, the EA provides no meaningful analysis of what the impacts on these parcels will be if the leases do get developed. For a variety of different resources, the EA states that it cannot predict the impacts from development until drilling permits are requested. This is incorrect, as discussed below. But BLM's position also illustrates why these parcels should be deferred. BLM has not done the analysis to determine what impacts are likely under the stipulations proposed for these leases, and whether those stipulations will be adequate to prevent significant adverse impacts to water supplies, public health and other resources. Nor can BLM conclude that the potential economic benefits of leasing them outweigh the environmental and economic harms to the local community and other resources. But by leasing these lands now, BLM will make an irreversible commitment of resources limiting the government's options if and when companies seek to drill for oil and gas in Grand County. If leases are issued now, it becomes difficult or impossible for BLM to change course later.

BLM should wait until development begins on private or state lands in Grand County before deciding to offer these parcels. If significant development starts occurring on nearby lands, BLM is likely to receive much higher bonus bids for these parcels than it will now. Moreover, if development begins on non-federal lands in Grand County, it will generate additional information about the impacts and development patterns that can be expected on public lands. That information will allow the agency to make a much better-informed decision on whether the economic and environmental costs of oil and gas leasing are outweighed by the purported benefits.

Similarly, BLM should evaluate a reasonable alternative to defer the lease parcels that overlap with inventoried lands with wilderness characteristics (LWC) in the White River Field Office. As we stated in previous comments on this lease sale, the 2015 White River Oil and Gas RMP Amendment (WRFO Oil and Gas RMPA) made decisions on management tiers based primarily on existing oil and gas leases and development potential. (See, for example, discussion in the Proposed RMPA at 2-34—35.) This is an inappropriate basis for allocating lands for conservation and making long-term management decisions, decisions which should consider all resources and potential future uses, not just oil and gas development. As new RMPs are getting finalized, a trend is emerging in which LWC units are being excluded from protective management simply because of existing undeveloped oil and gas leases. However, as those leases expire (in at least one instance even before the signing of the Final RMP/Record of Decision) these LWC units are no longer encumbered by the very oil and gas leases used by BLM as rationale for their decision. This creates a scenario where BLM has made management decisions for an area because of an undeveloped valid existing right that is now neither valid nor existing.

Many leases have expired in Tier 2 and Tier 3 LWC, leaving many of those LWC units largely or completely free of leases. For example, BLM's only cited rationale for managing the Raven Ridge LWC unit as a Tier 2 LWC rather than a Tier 1 LWC was the fact that at the time of analysis Raven Ridge did not have 5,000 contiguous acres of unleased BLM lands within its boundaries. However, because of lease expirations which occurred in January 2015—prior to the signing of the ROD for the WRFO Oil and Gas RMPA—this unit is now almost entirely unleased, with only

175 acres along the far northern border encumbered with existing leases. Raven Ridge now has over 5,600 acres of contiguous unleased lands and no longer contains the valid existing rights cited by BLM in its decision not to manage the unit as a Tier 1 LWC. Similar situations have occurred in the Willow Creek South, Coal Oil Gulch, Upper Coal Oil Rim, and Texas Mountain LWC units.

BLM should not offer parcels for lease in the June 2017 lease sale that overlap with LWC units that were categorized into Tier 2 and 3 in the WRFO Oil and Gas RMPA because of existing leases that no longer exist today. The basis for BLM's decision in the RMPA has changed. BLM should preserve the unleased status of these LWC units until the agency can consider appropriate management actions and allowable uses and restrictions across all resources and potential uses, not just oil and gas development, such as in the upcoming White River RMP revision.

II. BLM has failed to take a hard look at reasonably-foreseeable development on these leases.

The EA also fails to provide any meaningful analysis of the reasonably foreseeable impacts to a variety of resources from drilling on the protested parcels. Instead, BLM takes the position that: (a) the issuance of the leases is just a paper transaction with no direct impacts, and that (b) drilling on those leases is an "indirect" effect that is impossible to analyze at the leasing stage. The EA may identify the category of impact and what stipulations or legal requirements may apply, but takes the position that assessment of impacts on these lease parcels will be deferred until applications for drilling permits are filed and approved. For example, the EA takes this approach regarding impacts to:

- Groundwater and aquifers, EA at 54-55, 77-80;
- Surface water, id. at 62, 93-94;
- Lands with wilderness character, id. at 188-89;
- Oil and gas development, id. at 67-69;
- Soils and erosion, id. at 72-74;
- Migratory birds, id. at 99-101;
- Special status wildlife species, id. at 121-132;
- Special status plant species, id. at 136-37;
- Wetlands and riparian areas, id. at 141-42;
- Fish and aquatic wildlife, id. at 152-54; and
- Socioeconomics, id. at 195-96.

The EA's generic discussion of types of impacts fails to provide many facts necessary for BLM to make an informed decision about leasing individual parcels. For example, the EA does not consider the location and extent of potential drilling on these parcels. See id. at 17 ("BLM cannot forecast the number of wells that would ultimately be developed on any particular parcel"). As a result, the EA never assesses whether and to what extent stipulations will actually be effective in protecting resources on particular parcels, which resources on each parcel will suffer particular damage if an accident occurs, or where additional protective measures may be

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warranted on particular parcels.² Most of the EA's discussion of impacts, in fact, could apply to any lease sale (and appears to involve generic text that BLM cuts-and-pastes into many NEPA documents).

This does not satisfy NEPA. Merely describing the "the *category* of impacts anticipated from oil and gas development" isn't sufficient when it is reasonable for BLM to do more. See New Mexico, 565 F.3d at 707 (emphasis original). "NEPA does not permit an agency to remain oblivious to differing environmental impacts, or hide these from the public, simply because it understands the general type of impact likely to occur. Such a state of affairs would be anathema to NEPA's 'twin aims' of informed agency decision-making and public access to information." Id.

NEPA also does not allow BLM to defer the missing analysis until the APD stage on the theory that providing more information would be speculative at this point. "All environmental analyses required by NEPA must be conducted at 'the earliest possible time.'" Id.; 40 C.F.R. § 1501.2. This is especially important here, because issuance of the leases represents an irreversible commitment of resources that will limit BLM's ability to preclude drilling activities in the future. As the Tenth Circuit has held, "assessment of all reasonably foreseeable impacts must occur at the earliest practicable point, and must take place before an irretrievable commitment of resources is made." New Mexico, 565 F.3d at 718 (quotation omitted).

The impacts from development on the lease parcels are "reasonably foreseeable." An "effect is reasonably foreseeable if it is sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision." Colo. Env. Coal. v. Salazar, 877 F. Supp. 2d 1233, 1251 (D. Colo. 2013) (quotation omitted). The fact that no APDs have been filed yet does not excuse BLM from making reasonable predictions about where that development is likely to occur: "reasonable forecasting is implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'" Salazar, 877 F. Supp. 2d at 1251 (quoting Dubois v. U.S. Dept. of Agriculture, 102 F.3d 1273, 1286 (1st Cir.1996)). The test is whether an impact can or "cannot be described at the time the EIS is drafted with sufficient specificity to make its consideration useful to a reasonable decision-maker." DuBois, 102 F.3d at 1286.

It is entirely feasible for BLM to develop a useful forecast about potential development on these lease parcels. For example, many of the parcels in the White River and Little Snake field offices are adjacent to areas that already are being extensively developed. See EA lease parcel maps 2-9;³ see also, EA at 20-21 (relying on reasonably foreseeable development analysis to predict that most future development in the White River Field office "will be development (field extension, infill) wells with success rates of at least 95%"). For the lease parcels in the Kremmling Field Office, BLM can look to the McCallum field near the town of Walden, where dozens of federal

² Nor was this type of site-specific analysis done in connection with the Kremmling RMP (2015). That programmatic EIS presented a broad regional analysis, deferring any site-specific analysis until subsequent steps in the leasing and development process. Similarly, the impact analysis for lands with wilderness characteristics in the White River Oil and Gas RMP Amendment (2015) did not constitute the "hard look" required at the leasing stage through site-specific analysis.

³ https://eplanning.blm.gov/epl-front-office/projects/nepa/70241/92197/111092/PDF_Maps_Comment_May2017.pdf.

production wells have been drilled. EA at 22; see map of McCallum field wellbores, attached as Exhibit 1.⁴

BLM can readily develop a Geographic Information System (GIS) forecast of reasonably foreseeable drilling on the proposed lease parcels by overlaying existing development patterns from nearby federal and private lands on the proposed lease parcels, and accounting for NSO and other stipulations on those leases. See New Mexico, 565 F.3d at 718-19 (analysis of site-specific impacts required at leasing stage where the parcels were near area with extensive existing development). That forecast of the number of future wells and their potential locations would allow BLM to take a hard look at a variety of impacts such as habitat fragmentation, impairment of lands with wilderness character, risks to groundwater and surface water, and other resources.

In fact, BLM has done exactly this kind of analysis elsewhere. See, e.g., Roan FEIS at 2-7, attached as Exhibit 2 (plotting potential well locations on Roan Plateau to predict potential oil and gas recovery and visual impacts); New Mexico, 565 F.3d at 707-08 (rejecting argument that analyzing impacts of habitat fragmentation was not feasible where agency had actually done such an analysis). There is no reason BLM cannot do the same here, and it is required by NEPA.⁵

III. The EA's failure to analyze potential groundwater impacts in the Kremmling Field Office violates NEPA.

The EA's lack of analysis is especially problematic with regard to groundwater impacts on the Kremmling parcels. The EA acknowledges that the "geology and groundwater hydrology of [this

⁴ A review of the McCallum field shows that numerous long horizontal wells are being permitted and drilled there. Those long horizontals make it much less likely that the NSO stipulations attached to many Grand County leases will prevent those leases from being developed, contrary to BLM's assumption. See EA at 69 (predicting "difficulty for the lease holder to effectively and efficiently develop and recover the leased oil and gas resources"). Moreover, BLM's stipulations are only "recommended" for split estate lands with private surface; the surface owner is not required to follow them. EA at 64-65. Further, the NSO stipulations contain very broad provisions allowing BLM to grant waivers, exceptions or modifications that will allow companies to conduct surface activities despite the NSO provision. Id.; see, e.g., EA at pdf pp. 798-810 (Kremmling NSO stipulations). All of these factors make it arbitrary and capricious for BLM to rely on NSO stipulations to prevent all impacts to different resources, or to defer analysis of those impacts.

⁵ Moreover, BLM's claim that it lacks information about future development contravenes Council on Environmental Quality regulations. Those regulations require that where "the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information" in the NEPA analysis. 40 C.F.R. § 1502.22. Even where information cannot be obtained, the agency must include: "a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and [] the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community." Id. Here, information about impacts from drilling on the proposed leases is essential to a reasoned choice among alternatives – those are the primary effects from the leasing decision and issuing the leases represents an irreversible commitment. And as discussed above, the costs of obtaining that information are not "exorbitant." But the EA does not provide the analysis required by Section 1502.22.

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area] is very complex,” with faulting, natural fractures, and shifting plates. EA at 53-54. An accident caused by faulty well cementing and casing, or surface spills, could result in significant and permanent damage.

For example, no fewer than 99 domestic water wells and known springs are located on the Kremmling lease parcels. EA at 75. Development on these leases would pose a significant and direct threat to drinking water in the area.

Moreover, the renowned geothermal Hot Sulphur Springs are located only 0.8 miles from one of the lease parcels. EA at 64. BLM estimates that “the areal extent of the Hot Sulphur Springs thermal system could encompass 1.35 square miles” in a geologic area with “numerous faults and fractures,” id. at 63-64, that could transmit leaked petroleum, produced water, and fracking fluids from a drilling accident.

The EA, in fact, acknowledges generically that development and well construction problems could cause impacts to groundwater, EA at 55, 73, 77, but never discusses the extent of such impacts, where they present the greatest risk, or how they could be addressed or remediated. Despite these obvious risks, and the lack of analysis in the EA, BLM concludes that “None of the environmental effects associated with offering the proposed lease parcels for sale, as discussed in detail in the EA, were determined to be significant.” FONSI at 1. This finding is arbitrary and capricious, as discussed below. See New Mexico, 565 F.3d at 714-15 (finding similar conclusion arbitrary and capricious where no evidence supported BLM conclusion that impacts to aquifer would be minimal).

Instead of grappling with the potential impacts of its leasing decision, the EA relies on its regulations to protect groundwater during permitting.⁶ See, e.g., EA at 69 (“During the APD process the drilling plan and completion process would be reviewed for the potential impacts that could occur to [Hot Sulphur Springs] and apply the necessary mitigations to prevent adverse impacts”); id. at 55, 78-80 (discussing Onshore Order No. 2 and Colorado regulations).

This was arbitrary and capricious because existing regulations are not completely effective in preventing spills and other accidents from oil and gas development. For example, COGCC records show that in Jackson County alone, 22 spills were reported in just the past year – an average of almost two per month. COGCC Spill/Release Reports for Jackson County, attached as Exhibit 3. Some of these spills involved thousands of gallons of produced water or other fluids, which can reach aquifers in areas with shallow groundwater or complex hydrogeology. Id. at Document Numbers 401082436, 401083990, 401139346, 401144529, 401185628. See New Mexico, 565 F.3d at 715 (BLM cannot rely on regulations to assume that impacts will be minimal where the record showed that regulations did not prevent regular spills and other accidents).

BLM’s reliance on its existing regulations was also arbitrary and capricious because the agency has determined that those regulations are outdated and insufficient. For example, Onshore Order No. 2 is nearly 30 years old, 53 Fed. Reg. No. 223 (Nov. 18, 1988), and BLM’s existing Code of Federal Regulations operational rules date to the early 1980s. 47 Fed. Reg. 47754 (Oct. 27,

⁶ The EA also states that buffers of up to 1,000 feet will be applied between surface disturbing activities and water wells, springs or seeps. EA at 76. But surface buffers may not protect those water resources if companies are drilling long horizontal wells on those leases.

1982); 48 Fed. Reg. 36583 (Aug. 12, 1983); 80 Fed. Reg. 16127, 16128-31 (Mar. 26, 2015). In promulgating updated rules in 2015, BLM determined that the “increased complexity [of modern oil and gas wells] requires additional regulatory effort and oversight” to protect groundwater and other resources. 80 Fed. Reg. at 16128. For example, the 2015 regulations for the first time would require prior BLM approval for all hydraulic fracturing operations, to ensure that no pathways would allow gas or fluids to escape the underground zone being fractured and contaminate aquifers or cause other accidents. See 80 Fed. Reg. at 16147, 16153. This approval process would require a review of the subsurface area being drilled to ensure that well bores don’t intersect each other, that well casing is sufficient to protect usable waters, and that an adequate confining layer exists between the oil and gas producing formation and any usable aquifers. See id. at 16153. That review is especially important in areas like the Kremmling Field Office that have very complex subsurface geology.

BLM’s updated 2015 regulations, however, have been set aside by a Wyoming district court. State of Wyoming v. Dep’t of Interior, 2016 WL 3509415, * 12 (June 21, 2016). While that district court ruling is on appeal, BLM recently announced its intent to revoke the updated regulations, which would return the agency to reliance on its outdated and inadequate 30-year old standards. See Federal Appellants’ Motion To Continue Argument and Hold Case in Abeyance Pending Administrative Action at 2-3, State of Wyoming v. Zinke, No. 16-8068, 16-8069 (10th Cir. Mar. 15, 2017) (BLM Mot. for Abeyance). BLM cannot assume that its outdated regulations will prevent impacts to aquifers, given its determination that they are insufficient for modern drilling operations.

Further, it is currently unclear whether even BLM’s existing regulations, including Onshore Order No 2, are enforceable. The Wyoming district court decision appears to hold broadly that BLM lacks the legal authority to adopt regulations for protection of groundwater. See State of Wyoming, 2016 WL 3509415 at ** 4-9. The new presidential administration has asked the Tenth Circuit Court of Appeals to abate any review of that ruling – thus extending the uncertainty over BLM’s authority to prevent groundwater contamination when these leases are developed. See BLM Mot. for Abeyance at 3. Given BLM’s apparent acquiescence in a ruling that may invalidate its existing regulations, it is arbitrary and capricious for the agency to rely on those regulations to prevent significant impacts to groundwater. The agency needs to take a hard look at this issue before issuing leases.

IV. BLM’s FONSI is arbitrary and capricious

Given the EA’s lack of analysis, it would be arbitrary and capricious for BLM to make a finding of no significant impact (FONSI) for this lease sale. As discussed above, the EA fails to analyze the reasonably foreseeable impacts of developing these lease parcels on groundwater and numerous other resources. Having taken the position that it does not know what these impacts will be, BLM cannot also assert that they will not be significant, or that there are no “unknown risks.” FONSI at 2. Such a conclusion is arbitrary and capricious, and only highlights the need for BLM to do more analysis before offering these parcels. See Davis v. Mineta, 302 F.3d 1104, 1123-25 (10th Cir. 2002) (reversing FONSI that was arbitrary and capricious).

The FONSI also ignores the irreversible commitment of resources made by this decision. Its finding that “a decision to lease would not limit later resource management decisions for areas open to development proposals” is wrong as a legal matter. Similarly, the FONSI’s statement

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that “Areas with unique geographic characteristics” are not present is contrary to the record, which shows that thousands of acres of lands with wilderness character, and 21 areas of critical environmental concern, would be leased.

In addition, the magnitude of this lease sale – covering more than 101,000 acres (roughly 158 square miles) – makes it highly implausible to conclude that it will not have a significant impact on the environment. Notably, BLM has prepared EISs for leasing decisions involving much smaller areas. See WRNF FEIS at 1-5, 2-1 to 2-2 (80,380 acres); 2016 Roan Plateau ROD at ES-1 (73,800 acres). BLM offers no explanation for why these parcels are so different.

V. Leasing the Drowsy Water area is inconsistent with the direction set forth in the Kremmling RMP.

Parcels 7822, 7823, 7824, 7825, 7826, 7835 and 7852 overlap with Drowsy Water, an LWC unit that BLM inventoried and found possesses wilderness characteristics in the Kremmling RMP revision. While BLM decided to not manage Drowsy Water to protect its wilderness characteristics, the RMP states that this area will instead be managed for “forest health, public health and safety, and non-motorized and primitive backcountry recreation opportunities”:

Given the current forest health of the areas (i.e. MPB infestation), their proximity to residential areas (i.e. WUI status), they will instead be managed for forest health, public health and safety, and non-motorized and primitive backcountry recreation opportunities. Although adverse impacts from other resource uses and actions may occur within these areas without the specific protective measures in Appendix H, the wilderness characteristics in these areas will continue to receive indirect protections from management as prescribed in Appendix N for their primitive backcountry settings (Drowsy Water and Strawberry, Zone 1), non-motorized travel (all three areas in total), and non-mechanical travel (Drowsy Water and Strawberry, Zone 1).

Kremmling Proposed RMP at 4-588. Indeed, the Drowsy Water LWC unit is included in the Headwaters ERMA, which was designated in the Kremmling RMP for non-motorized recreation. Kremmling Approved RMP at L-64. Primitive backcountry recreation opportunities would be severely impacted by oil and gas development. Managing for forest health and public health and safety is also inconsistent with issuing oil and gas leases. Therefore, BLM should not offer the referenced parcels in the June 2017 lease sale because issuing those leases would be inconsistent with the management direction for this area set forth in the Kremmling RMP.

Additionally, our analysis of potential LWC units in the Kremmling Field Office, which we submitted in our protest of the Kremmling RMP, identified significant potential boundary delineation errors in the Drowsy Water unit. BLM Manual 6310 states that, “[t]he boundary [for a wilderness characteristics inventory unit] is usually based on the presence of wilderness inventory roads” but can also be based on changes in property ownership or developed rights-of-way. Wilderness Inventory Roads are defined as those roads that are “improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.” BLM Manual 6310 at .07 (Glossary). Some of the boundaries for the Drowsy Water unit do not appear to meet the above definition of a wilderness inventory road or other qualifying feature for boundary delineation purposes and therefore do not comply with BLM’s guidance.

Because we submitted that information with our protest of the Kremmling RMP and BLM has not yet considered it (to our knowledge), BLM should also update its LWC inventory for the Drowsy Water unit to ensure it is consistent with current agency policy as set forth in BLM Manual 6310. We submitted this comment with our scoping comments for this lease sale, but BLM did not address it in the EA or otherwise.

Conclusion: BLM has failed to take a hard look at the potential impacts of selling the proposed parcels, and specifically has not undertaken the required site-specific analysis of individual parcels. BLM should defer the protested parcels from the June 2017 oil and gas lease sale for the reasons articulated above.

Thank you,



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LIST OF EXHIBITS

1. Map of McCallum Field Wellbores
2. Roan Plateau Proposed Resource Management Plan Amendment and Final Environmental Impact Statement (2006), pp. 2-5—2-7.
3. Colorado Oil and Gas Conservation Commission Spill/Release Reports for Jackson County

April 10, 2017

Ruth Welch, State Director
BLM Colorado State Office
2850 Youngfield Street
Lakewood, Colorado 80215-7093
Hand delivered

RE: Formal Protest of June 8, 2017 Oil and Gas Lease Sale

Dear Director Welch:

Please accept and fully consider this timely protest of BLM Colorado's June 2017 oil and gas lease sale. This protest challenges BLM's Environmental Assessment, DOI-BLM-CO-NO5-2016-0099-EA, and the agency's decision to proceed with the sale of new leases located in the Kremmling and White River Field Offices. We specifically protest parcels:

| | | |
|-----------------|-----------------|-----------------|
| COC78361 (6560) | COC78345 (7872) | COC78288 (7821) |
| COC78365 (6571) | COC78346 (7873) | COC78289 (7822) |
| COC78360 (7096) | COC78367 (7890) | COC78290 (7823) |
| COC78347 (7097) | COC78362 (7891) | COC78291 (7824) |
| COC78348 (7098) | COC78363 (7892) | COC78292 (7825) |
| COC78349 (7099) | COC78368 (7893) | COC78293 (7826) |
| COC78356 (7105) | COC78369 (7902) | COC78294 (7827) |
| COC78357 (7107) | COC78370 (7904) | COC78300 (7835) |
| COC78358 (7108) | COC78315 (7814) | COC78301 (7836) |
| COC78350 (7109) | COC78314 (7816) | COC78302 (7838) |
| COC78351 (7110) | COC78284 (7817) | COC78303 (7839) |
| COC78352 (7111) | COC78285 (7818) | COC78304 (7840) |
| COC78359 (7124) | COC78286 (7819) | COC78295 (7852) |
| COC78282 (7866) | COC78287 (7820) | COC78296 (7857) |

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This protest is submitted on behalf of The Wilderness Society, Conservation Colorado and Rocky Mountain Wild. The undersigned groups previously submitted comments in September and December of 2016. In earlier comments we raised issues related to the appropriate level of analysis for these new proposed lease parcels, as well as issues related to specific values that must be considered and protected, and concerns about the adequacy of existing programmatic plans.

PROTESTING PARTIES

The Wilderness Society ("TWS") has a long-standing interest in the management of Bureau of Land Management lands in Colorado and engages frequently in the decision-making processes for land use planning and project proposals that could potentially affect wilderness-quality lands and other important natural resources managed by the BLM in Colorado. TWS members and staff enjoy a myriad of recreation opportunities on BLM-managed public lands, including hiking, biking, nature-viewing, photography, and the quiet contemplation in the solitude offered by

wild places. Founded in 1935, our mission is to protect wilderness and inspire Americans to care for our wild places.

Conservation Colorado is a grassroots organization working to protect our air, land, water, and people. We have a long and successful history in Colorado of collaborating on the key environmental issues of the day, and establishing strategic partnerships to find conservation success at the state and federal levels. Our organization has a long history of working on public lands issues across Colorado, but specifically on BLM lands on Colorado's western slope. Among our thousands of members are those that live, work, recreate and enjoy the BLM lands of the Kremmling and White River Field Offices for a wide variety of activities and have a vested interest in the management of those lands.

Rocky Mountain Wild ("RMW") is a non-profit environmental organization based in Denver, Colorado, that works to conserve and recover the native species and ecosystems of the Greater Southern Rockies using the best available science. RMW has a well-established history of participation in BLM planning and management activities. RMW works to save endangered species and preserve landscapes and critical ecosystems. It achieves these goals by working with biologists and landowners, utilizing GIS technology to promote understanding of complex land use issues, and monitoring government agencies whose actions affect endangered and threatened species. RMW's members and supporters include approximately 1,200 outdoor enthusiasts, wildlife conservationists, scientists, and concerned citizens across the country.

RMW's staff and members visit, recreate on, and use lands on or near the parcels proposed for leasing. Our staff and members enjoy various activities on or near land proposed for leasing, including viewing and studying rare and imperiled wildlife and native ecosystems, hiking, camping, taking photographs, and experiencing solitude. Our staff and members plan to return to the subject lands in the future to engage in these activities, and to observe and monitor rare and imperiled species and native ecosystems. We are collectively committed to ensuring that federal agencies properly manage rare and imperiled species and native ecosystems. Members and professional staff of RMW are conducting research and advocacy to protect the populations and habitat of rare and imperiled species discussed herein. Our members and staff value the important role that areas of high conservation value should play in safeguarding rare and imperiled species and natural communities, and other unique resources on public land.

STATEMENT OF REASONS FOR PROTEST

I. BLM has failed to consider a reasonable range of alternatives.

NEPA requires that BLM analyze in detail "all reasonable alternatives." 40 C.F.R. § 1502.14(a). The range of alternatives is the heart of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." New Mexico v. BLM, 565 F.3d 683, 708 (10th Cir. 2009). That analysis must cover a reasonable range of alternatives, so that an agency can make an informed choice between the spectrum of reasonable options. The Environmental Assessment (EA) for the June lease sale fails to meet this requirement. It only analyzes two alternatives:

- The No Action alternative, which would defer all lease parcels; and
- Leasing “all 106 nominated parcels available for leasing” under the governing resource management plans (RMPs), totaling 101,031 acres (the Lease Everything Alternative).

EA at 11. The EA also lists a “Preferred Alternative,” but it does not substantively differ from the Lease Everything Alternative. The Preferred Alternative would drop 215 acres from the 101,000-plus acre sale (0.2% of the total). EA at 11-12. But it does so because additional analysis revealed that those 215 acres are located within one mile of Greater Sage-Grouse leks and thus are closed to leasing under the Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendment of 2015. EA at 4, 12. Thus, the Preferred Alternative – like the Lease Everything Alternative – would offer every nominated parcel that is legally available for leasing. The “Preferred Alternative” is really nothing more than a minor correction to the Lease Everything Alternative.

An EA offering a choice between leasing every parcel nominated, and leasing nothing at all, does not present a reasonable range of alternatives. The “all or nothing” approach taken by the EA sharply contrasts with other recent NEPA documents prepared by BLM for comparable leasing decisions in Colorado. For example, in 2016 BLM addressed 65 existing leases on the White River National Forest – a decision which covered 80,380 acres, an area considerably smaller than the 101,000 acres here – with an EIS that analyzed six alternatives in detail. BLM, Previously Issued Oil and Gas Leases in the White River National Forest, Final Environmental Impact Statement at 1-5, 2-1 to 2-2 (Aug. 2016) (WRNF FEIS). Similarly, BLM’s 2016 supplemental EIS for the Roan Plateau Planning Area covered only 73,800 acres, but considered nine separate alternatives (including those from the 2006 EIS). BLM, Roan Plateau Planning Area Record of Decision and Approved Resource Management Plan Amendment at ES-1, 1-11 to 1-13 (Nov. 2016) (2016 Roan Plateau ROD). These examples illustrate how grossly inadequate the two alternatives are in the EA for this lease sale.

BLM must consider reasonable alternatives that fall between the two extremes. In particular, BLM should analyze in detail an alternative that would not lease the parcels in Grand County, which total approximately 27,500 acres. Failing to analyze such a middle-ground option would violate NEPA. See TWS v. Wisely, 524 F. Supp. 2d 1285, 1312 (D. Colo. 2007) (BLM violated NEPA by failing to consider “middle-ground compromise between the absolutism of the outright leasing and no action alternatives”); Muckleshoot Indian Tribe v. US Forest Serv., 177 F.3d 800, 813 (9th Cir. 1999) (NEPA analysis failed to consider reasonable range of alternatives where it “considered only a no action alternative along with two virtually identical alternatives”).

Eliminating the Grand County parcels is plainly a reasonable alternative. BLM expresses doubt about whether these will ever be developed. See, e.g., EA at 63 (none of parcels are in “high potential” areas for mineral development).¹ If so, and BLM expects these leases will never produce, there is no reason to offer them – especially given that the agency will be offering more than 70,000 acres in other parts of Colorado at the June lease sale. If the parcels are not

¹ According to Colorado Oil and Gas Conservation Commission records, there is currently no oil and gas production, and no pending or approved applications for permits to drill, in Grand County. See <http://cogcc.state.co.us/data.html#/cogis> (production data by county); <http://cogcc.state.co.us/permits.html#/permits> (pending or recently-approved applications); see also EA at 64 (no producing or shut-in wells in Grand County).

developed, leasing them offers little benefit because they will generate no royalties, and no significant additional employment or investment in the area. Moreover, the bonus payments and rentals from such leases will likely be minimal. There is simply no legal requirement or other reason to offer these leases if BLM does not expect them to be developed.

On the other hand, the EA provides no meaningful analysis of what the impacts on these parcels will be if the leases do get developed. For a variety of different resources, the EA states that it cannot predict the impacts from development until drilling permits are requested. This is incorrect, as discussed below. But BLM's position also illustrates why these parcels should be deferred. BLM has not done the analysis to determine what impacts are likely under the stipulations proposed for these leases, and whether those stipulations will be adequate to prevent significant adverse impacts to water supplies, public health and other resources. Nor can BLM conclude that the potential economic benefits of leasing them outweigh the environmental and economic harms to the local community and other resources. But by leasing these lands now, BLM will make an irreversible commitment of resources limiting the government's options if and when companies seek to drill for oil and gas in Grand County. If leases are issued now, it becomes difficult or impossible for BLM to change course later.

BLM should wait until development begins on private or state lands in Grand County before deciding to offer these parcels. If significant development starts occurring on nearby lands, BLM is likely to receive much higher bonus bids for these parcels than it will now. Moreover, if development begins on non-federal lands in Grand County, it will generate additional information about the impacts and development patterns that can be expected on public lands. That information will allow the agency to make a much better-informed decision on whether the economic and environmental costs of oil and gas leasing are outweighed by the purported benefits.

Similarly, BLM should evaluate a reasonable alternative to defer the lease parcels that overlap with inventoried lands with wilderness characteristics (LWC) in the White River Field Office. As we stated in previous comments on this lease sale, the 2015 White River Oil and Gas RMP Amendment (WRFO Oil and Gas RMPA) made decisions on management tiers based primarily on existing oil and gas leases and development potential. (See, for example, discussion in the Proposed RMPA at 2-34—35.) This is an inappropriate basis for allocating lands for conservation and making long-term management decisions, decisions which should consider all resources and potential future uses, not just oil and gas development. As new RMPs are getting finalized, a trend is emerging in which LWC units are being excluded from protective management simply because of existing undeveloped oil and gas leases. However, as those leases expire (in at least one instance even before the signing of the Final RMP/Record of Decision) these LWC units are no longer encumbered by the very oil and gas leases used by BLM as rationale for their decision. This creates a scenario where BLM has made management decisions for an area because of an undeveloped valid existing right that is now neither valid nor existing.

Many leases have expired in Tier 2 and Tier 3 LWC, leaving many of those LWC units largely or completely free of leases. For example, BLM's only cited rationale for managing the Raven Ridge LWC unit as a Tier 2 LWC rather than a Tier 1 LWC was the fact that at the time of analysis Raven Ridge did not have 5,000 contiguous acres of unleased BLM lands within its boundaries. However, because of lease expirations which occurred in January 2015—prior to the signing of the ROD for the WRFO Oil and Gas RMPA—this unit is now almost entirely unleased, with only

175 acres along the far northern border encumbered with existing leases. Raven Ridge now has over 5,600 acres of contiguous unleased lands and no longer contains the valid existing rights cited by BLM in its decision not to manage the unit as a Tier 1 LWC. Similar situations have occurred in the Willow Creek South, Coal Oil Gulch, Upper Coal Oil Rim, and Texas Mountain LWC units.

BLM should not offer parcels for lease in the June 2017 lease sale that overlap with LWC units that were categorized into Tier 2 and 3 in the WRFO Oil and Gas RMPA because of existing leases that no longer exist today. The basis for BLM's decision in the RMPA has changed. BLM should preserve the unleased status of these LWC units until the agency can consider appropriate management actions and allowable uses and restrictions across all resources and potential uses, not just oil and gas development, such as in the upcoming White River RMP revision.

II. BLM has failed to take a hard look at reasonably-foreseeable development on these leases.

The EA also fails to provide any meaningful analysis of the reasonably foreseeable impacts to a variety of resources from drilling on the protested parcels. Instead, BLM takes the position that: (a) the issuance of the leases is just a paper transaction with no direct impacts, and that (b) drilling on those leases is an "indirect" effect that is impossible to analyze at the leasing stage. The EA may identify the category of impact and what stipulations or legal requirements may apply, but takes the position that assessment of impacts on these lease parcels will be deferred until applications for drilling permits are filed and approved. For example, the EA takes this approach regarding impacts to:

- Groundwater and aquifers, EA at 54-55, 77-80;
- Surface water, id. at 62, 93-94;
- Lands with wilderness character, id. at 188-89;
- Oil and gas development, id. at 67-69;
- Soils and erosion, id. at 72-74;
- Migratory birds, id. at 99-101;
- Special status wildlife species, id. at 121-132;
- Special status plant species, id. at 136-37;
- Wetlands and riparian areas, id. at 141-42;
- Fish and aquatic wildlife, id. at 152-54; and
- Socioeconomics, id. at 195-96.

The EA's generic discussion of types of impacts fails to provide many facts necessary for BLM to make an informed decision about leasing individual parcels. For example, the EA does not consider the location and extent of potential drilling on these parcels. See id. at 17 ("BLM cannot forecast the number of wells that would ultimately be developed on any particular parcel"). As a result, the EA never assesses whether and to what extent stipulations will actually be effective in protecting resources on particular parcels, which resources on each parcel will suffer particular damage if an accident occurs, or where additional protective measures may be

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warranted on particular parcels.² Most of the EA's discussion of impacts, in fact, could apply to any lease sale (and appears to involve generic text that BLM cuts-and-pastes into many NEPA documents).

This does not satisfy NEPA. Merely describing the "the *category* of impacts anticipated from oil and gas development" isn't sufficient when it is reasonable for BLM to do more. See New Mexico, 565 F.3d at 707 (emphasis original). "NEPA does not permit an agency to remain oblivious to differing environmental impacts, or hide these from the public, simply because it understands the general type of impact likely to occur. Such a state of affairs would be anathema to NEPA's 'twin aims' of informed agency decision-making and public access to information." Id.

NEPA also does not allow BLM to defer the missing analysis until the APD stage on the theory that providing more information would be speculative at this point. "All environmental analyses required by NEPA must be conducted at 'the earliest possible time.'" Id.; 40 C.F.R. § 1501.2. This is especially important here, because issuance of the leases represents an irreversible commitment of resources that will limit BLM's ability to preclude drilling activities in the future. As the Tenth Circuit has held, "assessment of all reasonably foreseeable impacts must occur at the earliest practicable point, and must take place before an irretrievable commitment of resources is made." New Mexico, 565 F.3d at 718 (quotation omitted).

The impacts from development on the lease parcels are "reasonably foreseeable." An "effect is reasonably foreseeable if it is sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision." Colo. Env. Coal. v. Salazar, 877 F. Supp. 2d 1233, 1251 (D. Colo. 2013) (quotation omitted). The fact that no APDs have been filed yet does not excuse BLM from making reasonable predictions about where that development is likely to occur: "reasonable forecasting is implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'" Salazar, 877 F. Supp. 2d at 1251 (quoting Dubois v. U.S. Dept. of Agriculture, 102 F.3d 1273, 1286 (1st Cir.1996)). The test is whether an impact can or "cannot be described at the time the EIS is drafted with sufficient specificity to make its consideration useful to a reasonable decision-maker." DuBois, 102 F.3d at 1286.

It is entirely feasible for BLM to develop a useful forecast about potential development on these lease parcels. For example, many of the parcels in the White River and Little Snake field offices are adjacent to areas that already are being extensively developed. See EA lease parcel maps 2-9;³ see also, EA at 20-21 (relying on reasonably foreseeable development analysis to predict that most future development in the White River Field office "will be development (field extension, infill) wells with success rates of at least 95%"). For the lease parcels in the Kremmling Field Office, BLM can look to the McCallum field near the town of Walden, where dozens of federal

² Nor was this type of site-specific analysis done in connection with the Kremmling RMP (2015). That programmatic EIS presented a broad regional analysis, deferring any site-specific analysis until subsequent steps in the leasing and development process. Similarly, the impact analysis for lands with wilderness characteristics in the White River Oil and Gas RMP Amendment (2015) did not constitute the "hard look" required at the leasing stage through site-specific analysis.

³ https://eplanning.blm.gov/epl-front-office/projects/nepa/70241/92197/111092/PDF_Maps_Comment_May2017.pdf.

production wells have been drilled. EA at 22; see map of McCallum field wellbores, attached as Exhibit 1.⁴

BLM can readily develop a Geographic Information System (GIS) forecast of reasonably foreseeable drilling on the proposed lease parcels by overlaying existing development patterns from nearby federal and private lands on the proposed lease parcels, and accounting for NSO and other stipulations on those leases. See New Mexico, 565 F.3d at 718-19 (analysis of site-specific impacts required at leasing stage where the parcels were near area with extensive existing development). That forecast of the number of future wells and their potential locations would allow BLM to take a hard look at a variety of impacts such as habitat fragmentation, impairment of lands with wilderness character, risks to groundwater and surface water, and other resources.

In fact, BLM has done exactly this kind of analysis elsewhere. See, e.g., Roan FEIS at 2-7, attached as Exhibit 2 (plotting potential well locations on Roan Plateau to predict potential oil and gas recovery and visual impacts); New Mexico, 565 F.3d at 707-08 (rejecting argument that analyzing impacts of habitat fragmentation was not feasible where agency had actually done such an analysis). There is no reason BLM cannot do the same here, and it is required by NEPA.⁵

III. The EA's failure to analyze potential groundwater impacts in the Kremmling Field Office violates NEPA.

The EA's lack of analysis is especially problematic with regard to groundwater impacts on the Kremmling parcels. The EA acknowledges that the "geology and groundwater hydrology of [this

⁴ A review of the McCallum field shows that numerous long horizontal wells are being permitted and drilled there. Those long horizontals make it much less likely that the NSO stipulations attached to many Grand County leases will prevent those leases from being developed, contrary to BLM's assumption. See EA at 69 (predicting "difficulty for the lease holder to effectively and efficiently develop and recover the leased oil and gas resources"). Moreover, BLM's stipulations are only "recommended" for split estate lands with private surface; the surface owner is not required to follow them. EA at 64-65. Further, the NSO stipulations contain very broad provisions allowing BLM to grant waivers, exceptions or modifications that will allow companies to conduct surface activities despite the NSO provision. Id.; see, e.g., EA at pdf pp. 798-810 (Kremmling NSO stipulations). All of these factors make it arbitrary and capricious for BLM to rely on NSO stipulations to prevent all impacts to different resources, or to defer analysis of those impacts.

⁵ Moreover, BLM's claim that it lacks information about future development contravenes Council on Environmental Quality regulations. Those regulations require that where "the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information" in the NEPA analysis. 40 C.F.R. § 1502.22. Even where information cannot be obtained, the agency must include: "a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and [] the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community." Id. Here, information about impacts from drilling on the proposed leases is essential to a reasoned choice among alternatives – those are the primary effects from the leasing decision and issuing the leases represents an irreversible commitment. And as discussed above, the costs of obtaining that information are not "exorbitant." But the EA does not provide the analysis required by Section 1502.22.

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area] is very complex,” with faulting, natural fractures, and shifting plates. EA at 53-54. An accident caused by faulty well cementing and casing, or surface spills, could result in significant and permanent damage.

For example, no fewer than 99 domestic water wells and known springs are located on the Kremmling lease parcels. EA at 75. Development on these leases would pose a significant and direct threat to drinking water in the area.

Moreover, the renowned geothermal Hot Sulphur Springs are located only 0.8 miles from one of the lease parcels. EA at 64. BLM estimates that “the areal extent of the Hot Sulphur Springs thermal system could encompass 1.35 square miles” in a geologic area with “numerous faults and fractures,” id. at 63-64, that could transmit leaked petroleum, produced water, and fracking fluids from a drilling accident.

The EA, in fact, acknowledges generically that development and well construction problems could cause impacts to groundwater, EA at 55, 73, 77, but never discusses the extent of such impacts, where they present the greatest risk, or how they could be addressed or remediated. Despite these obvious risks, and the lack of analysis in the EA, BLM concludes that “None of the environmental effects associated with offering the proposed lease parcels for sale, as discussed in detail in the EA, were determined to be significant.” FONSI at 1. This finding is arbitrary and capricious, as discussed below. See New Mexico, 565 F.3d at 714-15 (finding similar conclusion arbitrary and capricious where no evidence supported BLM conclusion that impacts to aquifer would be minimal).

Instead of grappling with the potential impacts of its leasing decision, the EA relies on its regulations to protect groundwater during permitting.⁶ See, e.g., EA at 69 (“During the APD process the drilling plan and completion process would be reviewed for the potential impacts that could occur to [Hot Sulphur Springs] and apply the necessary mitigations to prevent adverse impacts”); id. at 55, 78-80 (discussing Onshore Order No. 2 and Colorado regulations).

This was arbitrary and capricious because existing regulations are not completely effective in preventing spills and other accidents from oil and gas development. For example, COGCC records show that in Jackson County alone, 22 spills were reported in just the past year – an average of almost two per month. COGCC Spill/Release Reports for Jackson County, attached as Exhibit 3. Some of these spills involved thousands of gallons of produced water or other fluids, which can reach aquifers in areas with shallow groundwater or complex hydrogeology. Id. at Document Numbers 401082436, 401083990, 401139346, 401144529, 401185628. See New Mexico, 565 F.3d at 715 (BLM cannot rely on regulations to assume that impacts will be minimal where the record showed that regulations did not prevent regular spills and other accidents).

BLM’s reliance on its existing regulations was also arbitrary and capricious because the agency has determined that those regulations are outdated and insufficient. For example, Onshore Order No. 2 is nearly 30 years old, 53 Fed. Reg. No. 223 (Nov. 18, 1988), and BLM’s existing Code of Federal Regulations operational rules date to the early 1980s. 47 Fed. Reg. 47754 (Oct. 27,

⁶ The EA also states that buffers of up to 1,000 feet will be applied between surface disturbing activities and water wells, springs or seeps. EA at 76. But surface buffers may not protect those water resources if companies are drilling long horizontal wells on those leases.

1982); 48 Fed. Reg. 36583 (Aug. 12, 1983); 80 Fed. Reg. 16127, 16128-31 (Mar. 26, 2015). In promulgating updated rules in 2015, BLM determined that the “increased complexity [of modern oil and gas wells] requires additional regulatory effort and oversight” to protect groundwater and other resources. 80 Fed. Reg. at 16128. For example, the 2015 regulations for the first time would require prior BLM approval for all hydraulic fracturing operations, to ensure that no pathways would allow gas or fluids to escape the underground zone being fractured and contaminate aquifers or cause other accidents. See 80 Fed. Reg. at 16147, 16153. This approval process would require a review of the subsurface area being drilled to ensure that well bores don’t intersect each other, that well casing is sufficient to protect usable waters, and that an adequate confining layer exists between the oil and gas producing formation and any usable aquifers. See id. at 16153. That review is especially important in areas like the Kremmling Field Office that have very complex subsurface geology.

BLM’s updated 2015 regulations, however, have been set aside by a Wyoming district court. State of Wyoming v. Dep’t of Interior, 2016 WL 3509415, * 12 (June 21, 2016). While that district court ruling is on appeal, BLM recently announced its intent to revoke the updated regulations, which would return the agency to reliance on its outdated and inadequate 30-year-old standards. See Federal Appellants’ Motion To Continue Argument and Hold Case in Abeyance Pending Administrative Action at 2-3, State of Wyoming v. Zinke, No. 16-8068, 16-8069 (10th Cir. Mar. 15, 2017) (BLM Mot. for Abeyance). BLM cannot assume that its outdated regulations will prevent impacts to aquifers, given its determination that they are insufficient for modern drilling operations.

Further, it is currently unclear whether even BLM’s existing regulations, including Onshore Order No 2, are enforceable. The Wyoming district court decision appears to hold broadly that BLM lacks the legal authority to adopt regulations for protection of groundwater. See State of Wyoming, 2016 WL 3509415 at ** 4-9. The new presidential administration has asked the Tenth Circuit Court of Appeals to abate any review of that ruling – thus extending the uncertainty over BLM’s authority to prevent groundwater contamination when these leases are developed. See BLM Mot. for Abeyance at 3. Given BLM’s apparent acquiescence in a ruling that may invalidate its existing regulations, it is arbitrary and capricious for the agency to rely on those regulations to prevent significant impacts to groundwater. The agency needs to take a hard look at this issue before issuing leases.

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IV. BLM’s FONSI is arbitrary and capricious

Given the EA’s lack of analysis, it would be arbitrary and capricious for BLM to make a finding of no significant impact (FONSI) for this lease sale. As discussed above, the EA fails to analyze the reasonably foreseeable impacts of developing these lease parcels on groundwater and numerous other resources. Having taken the position that it does not know what these impacts will be, BLM cannot also assert that they will not be significant, or that there are no “unknown risks.” FONSI at 2. Such a conclusion is arbitrary and capricious, and only highlights the need for BLM to do more analysis before offering these parcels. See Davis v. Mineta, 302 F.3d 1104, 1123-25 (10th Cir. 2002) (reversing FONSI that was arbitrary and capricious).

The FONSI also ignores the irreversible commitment of resources made by this decision. Its finding that “a decision to lease would not limit later resource management decisions for areas open to development proposals” is wrong as a legal matter. Similarly, the FONSI’s statement

that “Areas with unique geographic characteristics” are not present is contrary to the record, which shows that thousands of acres of lands with wilderness character, and 21 areas of critical environmental concern, would be leased.

In addition, the magnitude of this lease sale – covering more than 101,000 acres (roughly 158 square miles) – makes it highly implausible to conclude that it will not have a significant impact on the environment. Notably, BLM has prepared EISs for leasing decisions involving much smaller areas. See WRNF FEIS at 1-5, 2-1 to 2-2 (80,380 acres); 2016 Roan Plateau ROD at ES-1 (73,800 acres). BLM offers no explanation for why these parcels are so different.

V. Leasing the Drowsy Water area is inconsistent with the direction set forth in the Kremmling RMP.

Parcels 7822, 7823, 7824, 7825, 7826, 7835 and 7852 overlap with Drowsy Water, an LWC unit that BLM inventoried and found possesses wilderness characteristics in the Kremmling RMP revision. While BLM decided to not manage Drowsy Water to protect its wilderness characteristics, the RMP states that this area will instead be managed for “forest health, public health and safety, and non-motorized and primitive backcountry recreation opportunities”:

Given the current forest health of the areas (i.e. MPB infestation), their proximity to residential areas (i.e. WUI status), they will instead be managed for forest health, public health and safety, and non-motorized and primitive backcountry recreation opportunities. Although adverse impacts from other resource uses and actions may occur within these areas without the specific protective measures in Appendix H, the wilderness characteristics in these areas will continue to receive indirect protections from management as prescribed in Appendix N for their primitive backcountry settings (Drowsy Water and Strawberry, Zone 1), non-motorized travel (all three areas in total), and non-mechanical travel (Drowsy Water and Strawberry, Zone 1).

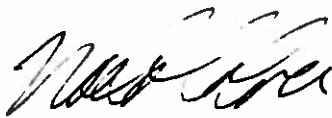
Kremmling Proposed RMP at 4-588. Indeed, the Drowsy Water LWC unit is included in the Headwaters ERMA, which was designated in the Kremmling RMP for non-motorized recreation. Kremmling Approved RMP at L-64. Primitive backcountry recreation opportunities would be severely impacted by oil and gas development. Managing for forest health and public health and safety is also inconsistent with issuing oil and gas leases. Therefore, BLM should not offer the referenced parcels in the June 2017 lease sale because issuing those leases would be inconsistent with the management direction for this area set forth in the Kremmling RMP.

Additionally, our analysis of potential LWC units in the Kremmling Field Office, which we submitted in our protest of the Kremmling RMP, identified significant potential boundary delineation errors in the Drowsy Water unit. BLM Manual 6310 states that, “[t]he boundary [for a wilderness characteristics inventory unit] is usually based on the presence of wilderness inventory roads” but can also be based on changes in property ownership or developed rights-of-way. Wilderness Inventory Roads are defined as those roads that are “improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.” BLM Manual 6310 at .07 (Glossary). Some of the boundaries for the Drowsy Water unit do not appear to meet the above definition of a wilderness inventory road or other qualifying feature for boundary delineation purposes and therefore do not comply with BLM’s guidance.

Because we submitted that information with our protest of the Kremmling RMP and BLM has not yet considered it (to our knowledge), BLM should also update its LWC inventory for the Drowsy Water unit to ensure it is consistent with current agency policy as set forth in BLM Manual 6310. We submitted this comment with our scoping comments for this lease sale, but BLM did not address it in the EA or otherwise.

Conclusion: BLM has failed to take a hard look at the potential impacts of selling the proposed parcels, and specifically has not undertaken the required site-specific analysis of individual parcels. BLM should defer the protested parcels from the June 2017 oil and gas lease sale for the reasons articulated above.

Thank you,



Nada Culver, Senior Counsel and Director
The Wilderness Society
1660 Wynkoop St. Ste. 850
Denver, CO 80202
nada_culver@twc.org
303-225-4635
www.wilderness.org



Luke Schafer, West Slope Advocacy Director
Conservation Colorado
529 Yampa Ave
Craig, CO 81625
luke@conservationco.org
970-824-5241
www.conservationco.org

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:28



Matthew Sandler, Staff Attorney
Rocky Mountain Wild
1536 Wynkoop St., Suite 900
Denver, CO 80202
matt@rockymountainwild.org
303-579-5162
www.rockymountainwild.org

LIST OF EXHIBITS

1. Map of McCallum Field Wellbores
2. Roan Plateau Proposed Resource Management Plan Amendment and Final Environmental Impact Statement (2006), pp. 2-5—2-7.
3. Colorado Oil and Gas Conservation Commission Spill/Release Reports for Jackson County

Exhibit 1

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:29

McCallum Field Wellbores

Data Sources: ESRI, BLM,
COGCC, USGS
April 5, 2017

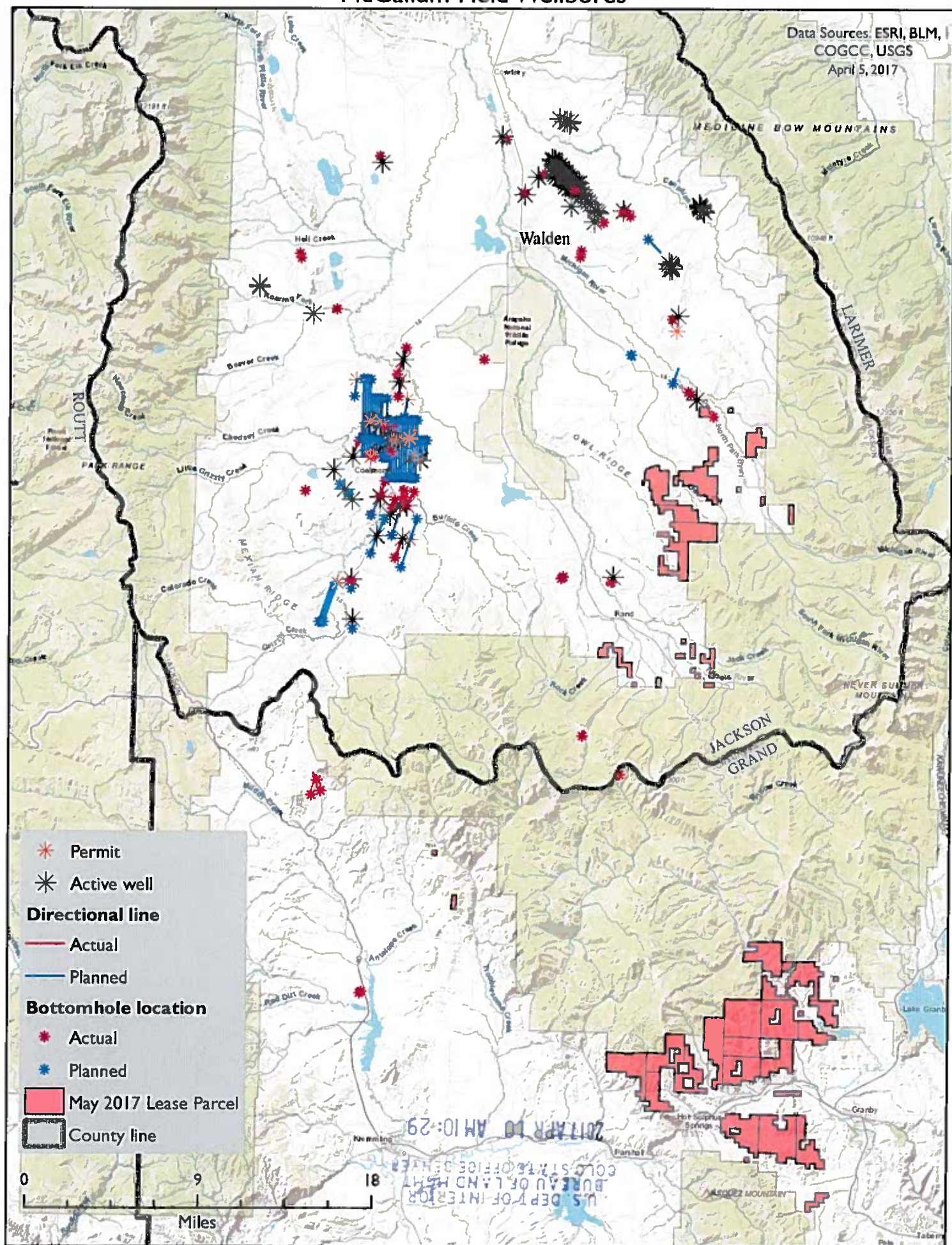


Exhibit 2

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:29

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone (303) 894-2100 Fax: (303) 894-2109



Document Number:

400947893

Date Received:

12/04/2015

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

444247

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|---------------------------|-------------------------------------|
| Name of Operator: <u>EE3 LLC</u> | Operator No: <u>10450</u> | Phone Numbers |
| Address: <u>4410 ARAPAHOE AVENUE #100</u> | | Phone: <u>(303) 444-8881</u> |
| City: <u>BOULDER</u> | State: <u>CO</u> | Zip: <u>80303</u> |
| Contact Person: <u>Ruth Hartshorn</u> | | Mobile: <u>()</u> |
| | | Email: <u>rhartshorn@ee3llc.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400947893

| | | |
|--|--------------------------------------|---------------------------------------|
| Initial Report Date: <u>12/04/2015</u> | Date of Discovery: <u>03/15/2015</u> | Spill Type: <u>Historical Release</u> |
|--|--------------------------------------|---------------------------------------|

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NENE SEC 32 TWP 8N RNG 80W MERIDIAN 6

Latitude: 40.628007 Longitude: -106.397418

Municipality (if within municipal boundaries): _____ County: JACKSON

Reference Location:

Facility Type: WELL PAD ☒ Facility/Location ID No 436007

☐ No Existing Facility or Location ID No.

☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? No

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

| | |
|---|--|
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>0</u> |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> |

Specify: 296 Cubic Yards of E&P Waste

Land Use:

Current Land Use: NON-CROP LAND Other(Specify): _____

Weather Condition: Good

Surface Owner: FEE Other(Specify): _____

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MGMT
 COLORADO STATE OFFICE BENEVE
 2017 APR 10 AM 10:29

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A hose broke on the Grizzly #03-32H jet pump. Whilst the pump was shutting down less than one barrel of power fluid (oil) was released into the pumphouse. The pumphouse is located on a rubber mat ensuring that any fluid released was contained and did not penetrate the soil. Any free oil was picked up with a vacuum truck and transferred back through the production facilities on the location. Stained gravel and dirt from inside the pumphouse was transferred to a bermed area on location. Material from the bermed location has been tested and taken to Twin Environmental Waste Disposal Facility. Form 27 Document #400948064 has been submitted with a remediation plan.

List Agencies and Other Parties Notified:

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Ruth Hartshorn
Title: Business Manager Date: 12/04/2015 Email: rhartshorn@ee3llc.com

| <u>COA Type</u> | <u>Description</u> |
|-----------------|--|
| | supplemental shall request closure of spill proceeding under Form 27 remediation workplan. |
| | A supplemental report, populated with information on the tab, "spill/release detail". |
| | Lat/Long provided are for wellhead and not for spill/discharge point. |

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------|
| 400947893 | FORM 19 SUBMITTED |
| 400948140 | DISPOSAL MANIFEST |

Total Attach: 2 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | |

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400966846

Date Received:

01/08/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

444504

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR | | Phone: () |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400966846

| | | |
|---|--|------------------------------------|
| Initial Report Date: 01/08/2016 | Date of Discovery: 12/30/2015 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR SWNE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.534837 | Longitude: -106.394970 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input checked="" type="checkbox"/> Facility/Location ID No 324750 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? No | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >0 and <1 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 19 degrees; clear | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MGMT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:29

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

While hot oiling the PW tank to thaw, a 2" nipple separated from a hammer union in the production line causing the PW tank to drain. Lost approx. 50 bbls before discovered by Heat Waves and tank was shut in. Schedule repair to line and review potential battery modifications.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|--------------|-------------|--------------|---------------------|
| 1/6/2016 | COGCC | Kris Neidel | 970-871-1963 | Form 19 to be filed |
| | | | - | |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Tiffany Golay
Title: Sr Regulatory Tech Date: 01/08/2016 Email: tgolay@sandridgeenergy.com

| COA Type | Description |
|----------|---|
| | COGCC Staff talked to Operator representative, Clay Harwell. It was agreed that we will discuss these issues further to assure proper reporting. |
| | In box titled "specify", under heading "Fluid(s) Spilled /Released (please answer Yes/No)"; should include the specific volume of fluids spilled. Example: Estimated Produced Water Spill Volume was selected as ">=5and<100", if volume spilled was 65 BBLs, this should be included in "specify" box. |
| | spill map should be of spill area; it should define (visually) the spill path. Supplemental report should include the spill map with required information. |
| | Lat/Long provided is for wellhead, the Lat/Long on Form 19 should be for the point of spill/discharge. Please provide this Lat/Long on supplemental report (due 10 days from date of discovery). |

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 400966846 | FORM 19 SUBMITTED |
| 400966854 | AERIAL PHOTOGRAPH |

Total Attach: 2 Files

General Comments

| User Group | Comment | Comment Date |
|------------|---------|--------------|
| | | |

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400971886

Date Received:

01/15/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

444504

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: () |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| | Zip: 73102 | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400966846

| | | |
|---|--|------------------------------------|
| Initial Report Date: 01/08/2016 | Date of Discovery: 12/30/2015 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR SWNE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.534837 | Longitude: -106.394970 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input checked="" type="checkbox"/> Facility/Location ID No 324750 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- - | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? No | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >0 and <1 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 19 degrees; clear | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MGMT
 COLORADO OFFICE DENVER
 2017 APR 10 AM 10:29

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

While hot oiling the PW tank to thaw, a 2" nipple separated from a hammer union in the production line causing the PW tank to drain. Lost approx. 50 bbls before discovered by Heat Waves and tank was shut in. Schedule repair to line and review potential battery modifications.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|--------------|-------------|--------------|---------------------|
| 1/6/2016 | COGCC | Kris Neidel | 970-871-1963 | Form 19 to be filed |
| | | | - | |

SPILL/RELEASE DETAIL REPORTS

| | | | | |
|----|---------------------------|------------|--|--|
| #1 | Supplemental Report Date: | 01/15/2016 | | |
|----|---------------------------|------------|--|--|

| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
|-----------------|---------------|-----------------|--------------------------|
| OIL | 1 | 1 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 50 | 50 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify: _____

Was spill/release completely contained within berms or secondary containment? YES Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 30 Width of Impact (feet): 20

Depth of Impact (feet BGS): 0 Depth of Impact (inches BGS): _____

How was extent determined?

location had plastic liner

Soil/Geology Description:

gravel over liner

Depth to Groundwater (feet BGS) 80 Number Water Wells within 1/2 mile radius: 0

If less than 1 mile, distance in feet to nearest

| | | | |
|------------|---|-------------------|---|
| Water Well | <u>None</u> <input checked="" type="checkbox"/> | Surface Water | <u>None</u> <input checked="" type="checkbox"/> |
| Wetlands | <u>None</u> <input checked="" type="checkbox"/> | Springs | <u>None</u> <input checked="" type="checkbox"/> |
| Livestock | <u>None</u> <input checked="" type="checkbox"/> | Occupied Building | <u>None</u> <input checked="" type="checkbox"/> |

Additional Spill Details Not Provided Above:

exact depth to Groundwater and number of waterwells within 1/2 mile radius is unknown at time of report

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Tiffany Golay

Title: Sr Regulatory Tech Date: 01/15/2016 Email: tgolay@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 400971886 | FORM 19 SUBMITTED |
| 400971890 | SITE MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|--|
| | | |
|--|--|--|

Total: 0 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:29

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400966056

Date Received:

01/08/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

444502

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR | | Phone: () |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400966056

| | | |
|---|--|------------------------------------|
| Initial Report Date: 01/07/2016 | Date of Discovery: 01/05/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 12 TWP 7N RNG 81W MERIDIAN 6 | | |
| Latitude: 40.596919 | Longitude: -106.426348 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input checked="" type="checkbox"/> Facility/Location ID No 412905 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- - | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? No | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >0 and <1 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): _____ | |
| Weather Condition: 19 degrees; clear | | |
| Surface Owner: FEE | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

The produced water production line separated from a hammer Union (3"). Suspect freezing- discovered the heat trace line isolated from produced water line. The spill will be remediated- schedule repairs to the hammer Union and reroute trace line correctly.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|--------------|-------------|--------------|---------------------|
| 1/6/2016 | COGCC | Kris Neidel | 970-871-1963 | Form 19 to be filed |
| | | | - | |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Tiffany Golay

Title: Sr Regulatory Tech Date: 01/08/2016 Email: tgolay@sandridgeenergy.com

COA Type

Description

| | |
|--|---|
| | In box titled "specify", under heading "Fluid(s) Spilled /Released (please answer Yes/No)"; should include the specific volume of fluids spilled. Example: Estimated Produced Water Spill Volume was selected as ">=5and<100", if volume spilled was 65 BBLs, this should be included in "specify" box. |
| | Staff talked to Operator representative, Clay Harwell. It was agreed that we will discuss these issues further to assure proper reporting. |
| | Facility Id provided is not correct, work with COGCC staff, Kris Neidel for guidance in selecting Facility number for reports. |
| | spill map should be of spill area; it should define (visually) the spill path. Supplemental report should include the spill map with required information. |
| | Lat/Long provided is for wellhead, the Lat/Long on Form 19 should be for the point of spill/discharge. Please provide this Lat/Long on supplemental report (due 10 days from date of discovery). |

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 400966056 | FORM 19 SUBMITTED |
| 400966842 | AERIAL PHOTOGRAPH |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|--|
| | | |
|--|--|--|

Total: 0 comment(s)

2017 APR 10 AM 10:29
BUREAU OF LAND MGMT
U.S. DEPT OF INTERIOR
COLORADO STATE OFFICE DENVER

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400971863

Date Received:

01/15/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

444502

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: () |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400966056

| | | |
|---|--|------------------------------------|
| Initial Report Date: 01/07/2016 | Date of Discovery: 01/05/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 12 TWP 7N RNG 81W MERIDIAN 6 | | |
| Latitude: 40.596919 | Longitude: -106.426348 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input checked="" type="checkbox"/> Facility/Location ID No 412905 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- - | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? No | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >0 and <1 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 19 degrees; clear | | |
| Surface Owner: FEE | Other(Specify): | |
| Check If Impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

The produced water production line separated from a hammer Union (3"). Suspect freezing- discovered the heat trace line isolated from produced water line. The spill will be remediated- schedule repairs to the hammer Union and reroute trace line correctly.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|--------------|-------------|--------------|---------------------|
| 1/6/2016 | COGCC | Kris Neidel | 970-871-1963 | Form 19 to be filed |
| | | | | |

SPILL/RELEASE DETAIL REPORTS

| #1 | Supplemental Report Date: | 01/15/2016 | |
|-----------------|---------------------------|------------------------|--------------------------|
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 1 | 1 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 60 | 60 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify: _____

Was spill/release completely contained within berms or secondary containment? YES Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 70 Width of Impact (feet): 40

Depth of Impact (feet BGS): 0 Depth of Impact (inches BGS): _____

How was extent determined?

Location had plastic liner

Soil/Geology Description:

gravel over liner

Depth to Groundwater (feet BGS) 80 Number Water Wells within 1/2 mile radius: 0

If less than 1 mile, distance in feet to nearest

| | | | | | |
|------------|-------|--|-------------------|-------|--|
| Water Well | _____ | None <input checked="" type="checkbox"/> | Surface Water | _____ | None <input checked="" type="checkbox"/> |
| Wetlands | _____ | None <input checked="" type="checkbox"/> | Springs | _____ | None <input checked="" type="checkbox"/> |
| Livestock | _____ | None <input checked="" type="checkbox"/> | Occupied Building | _____ | None <input checked="" type="checkbox"/> |

Additional Spill Details Not Provided Above:

Exact depth to Groundwater and Number of wells within 1/2 mile is unknown at the time of report.

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:29

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Tiffany Golay

Title: Sr Regulatory Tech Date: 01/15/2016 Email: tgolay@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 400971863 | FORM 19 SUBMITTED |
| 400971867 | SITE MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|---------------|--|-------------------------|
| Environmental | water well, required information are on another supplemental report. | 2/1/2016 12:53:53 PM |
|---------------|--|-------------------------|

Total: 1 comment(s)

FORM

19

Rev 8/13

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400972044

Date Received:

01/15/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

444502

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: () |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400966056

| | | |
|---|--|------------------------------------|
| Initial Report Date: 01/07/2016 | Date of Discovery: 01/05/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 12 TWP 7N RNG 81W MERIDIAN 6 | | |
| Latitude: 40.596919 | Longitude: -106.426348 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input checked="" type="checkbox"/> Facility/Location ID No 412905 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- - | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? No | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >0 and <1 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 19 degrees; clear | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:29

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

The produced water production line separated from a hammer Union (3"). Suspect freezing- discovered the heat trace line isolated from produced water line. The spill will be remediated- schedule repairs to the hammer Union and reroute trace line correctly.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|--------------|-------------|--------------|---------------------|
| 1/6/2016 | COGCC | Kris Neidel | 970-871-1963 | Form 19 to be filed |
| | | | - | |

SPILL/RELEASE DETAIL REPORTS

#1 Supplemental Report Date: 01/15/2016

| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
|-----------------|---------------|-----------------|--------------------------|
| OIL | 1 | 1 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 60 | 60 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify:

Was spill/release completely contained within berms or secondary containment? YES Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 70 Width of Impact (feet): 40

Depth of Impact (feet BGS): 0 Depth of Impact (inches BGS):

How was extent determined?

location had plastic liner

Soil/Geology Description:

gravel over liner

Depth to Groundwater (feet BGS) 2

Number Water Wells within 1/2 mile radius: 0

If less than 1 mile, distance in feet to nearest
Water Well None ☒ Surface Water 209 None ☐
Wetlands None ☒ Springs None ☒
Livestock None ☒ Occupied Building None ☒

Additional Spill Details Not Provided Above:

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Tiffany Golay

Title: Sr Regulatory Tech Date: 01/15/2016 Email: tgolay@sandridgeenergy.com

COA Type

Description

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 400972044 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

Total: 0 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:29

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone (303) 894-2100 Fax: (303) 894-2109



Document Number:

401039536

Date Received:

05/03/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

445701

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 430-4515 |
| City: OKLAHOMA CITY | State: OK | Zip: 73102 |
| Contact Person: Clay Harwell | | Mobile: (405) 590-7483 |
| | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401039536

| | | |
|---------------------------------|-------------------------------|--------------------------|
| Initial Report Date: 05/02/2016 | Date of Discovery: 04/26/2016 | Spill Type: Recent Spill |
|---------------------------------|-------------------------------|--------------------------|

Spill/Release Point Location:

| | | | | |
|--|--------|--------|---------|------------|
| Location of Spill/Release: QTRQTR SWSW | SEC 29 | TWP 9N | RNG 79W | MERIDIAN 6 |
|--|--------|--------|---------|------------|

Latitude: 40.717000 Longitude: -106.294000

Municipality (if within municipal boundaries): Walden County: JACKSON

Reference Location:

Facility Type: OTHER ☐ Facility/Location ID No ☐ No Existing Facility or Location ID No. ☒ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

| | |
|---|--|
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 |
| Estimated Other E&P Waste Spill Volume(bbl): >=5 and <100 | Estimated Drilling Fluid Spill Volume(bbl): >=5 and <100 |

Specify: Water Based Drill Cuttings

Land Use:

Current Land Use: NON-CROP LAND Other(Specify): Intersection of CO 125, CO 14 Hwy

Weather Condition: 36 degrees, Cloudy

Surface Owner: OTHER (SPECIFY) Other(Specify): COMMERCIAL

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☒ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

On April 26, 2016 at approximately 1300 hours, a truck owned by Bar-S Services transporting water-based drill cuttings in a side-dump trailer from the Mutul 0780 4-7H well departed their facility in Walden, CO to deliver the cuttings to the Twin Enviro landfill in Milner, CO for disposal. While traveling southbound on CO Hwy 125 toward the intersection of CO Hwy 14, the truck driver applied his brakes to slow for the turn, resulting in approximately 10 tons of drill cuttings being discharged from the side dump trailer onto the ground. The resulting spill impacted approximately 300 linear feet of HWY 14 and the adjacent shoulder. Bar-S notified the CDOT, The Colorado Highway Patrol and SandRidge Energy of the incident, after which SandRidge dispatched its clean-up contractor to the spill site. The intersection was closed and traffic re-routed to allow contractor personnel safe access to the spill site. The spill was cleaned up and approved by CDOT. the road was open at 1940 hours.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|--------------|--------------|--|
| 4/26/2016 | CDOT | Wagner Kelly | 970-724-9685 | CODOT did not required a HAZMAT response as the "spill" was contained and cleaned up. No citation or violation was issued. |
| 5/26/2016 | COGCC | Kris Neidel | 970-871-1963 | Notified Kris of the spill and the details. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: EH&S Supervisor Date: 05/03/2016 Email: charwell@sandridgeenergy.com

COA Type Description

Attachment Check List

Att Doc Num Name

401039536 FORM 19 SUBMITTED

Total Attach: 1 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|---|-------------------------|
| Environmental | Operator should submit a supplemental report that has "root cause analysis", specifically addressing why the cuttings had a liquid phase. Please include measures to prevent this same event from re-occurring. | 5/12/2016 1:34:48 PM |

Total: 1 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:29

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401071988

Date Received:

07/01/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

446487

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 4296630 |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 4205570 |
| Zip: 73102 | | Email: kraymond@sandridgeenergy.com |
| Contact Person: Ken Raymond | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401071988

| | | |
|---------------------------------|-------------------------------|--------------------------|
| Initial Report Date: 06/30/2016 | Date of Discovery: 06/30/2016 | Spill Type: Recent Spill |
|---------------------------------|-------------------------------|--------------------------|

Spill/Release Point Location:

Location of Spill/Release: QTRQTR SWSW SEC 32 TWP 7N RNG 80W MERIDIAN 6

Latitude: 40.528256 Longitude: -106.404319

Municipality (if within municipal boundaries): County: JACKSON

Reference Location:

Facility Type: WELL ☐ Facility/Location ID No ☐ No Existing Facility or Location ID No. ☒ Well API No. (Only if the reference facility is well) 05-057-06469

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

| | |
|--|---|
| Estimated Oil Spill Volume(bbl): >=5 and <100 | Estimated Condensate Spill Volume(bbl): 0 |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 |

Specify: _____

Land Use:

Current Land Use: NON-CROP LAND Other(Specify): _____

Weather Condition: Clear and 64 degrees

Surface Owner: FEE Other(Specify): _____

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

Excess cable on the stroke cable snagged the nipple holding the pressure gauge on the pump tee. The nipple broke allowing oil to spill on the ground around the well head. Approximately 12 BBL of oil was spilled of which approximately 10 BBL was recovered. The broken nipple was replaced and the well placed back into service. A vacuum truck removed the spilled oil. The contaminated soil will be removed and placed in containment for off-site disposal.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|------|--------------|-------------|-------------|--|
| | COGCC | Kris Neidel | 970-8711963 | COGCC was notified who will inspect the well site on 07/01/2016. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Ken Raymond
Title: EHS Manager Date: 07/01/2016 Email: kraymond@sandrisgeenergy.com

COA Type Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num Name

| | |
|-----------|-------------------|
| 401071988 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|---|---------------------|
| Environmental | final request for closure shall include total volume of soil removed and final disposal location. | 7/6/2016 8:32:13 AM |
| Environmental | It is understood that the spill did not leave the location (pad). | 7/6/2016 8:23:37 AM |
| Environmental | supplemental report should have a more accurate volume of oil. Due 7/10/2016. | 7/6/2016 8:23:10 AM |

Total: 3 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:30

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401077678

Date Received:

07/14/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

446739

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 5907483 |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 5907483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401077678

| | | |
|---|---|------------------------------------|
| Initial Report Date: 07/13/2016 | Date of Discovery: 07/12/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 8 TWP 6N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.511180 | Longitude: -106.391010 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06520 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >=5 and <100 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: Clear, Winds W 3-40 mph. | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

An inspection into the cause of the release at the Surprise 02-8H revealed that the rod packing was leaking which normally would be collected by the "e-pot". However, the e-pot's high level kill switch malfunctioned causing the pumping unit to repeatedly shut down and restart. This allowed the oil that was leaking past the rod packing to completely fill up the e-pot, resulting in oil to exit the top of the pumping tee as a mist. Due to wind speeds between 30-40 mph, the oil mist was carried off-site in an easterly direction and onto private land adjacent to the well site. An area estimated to be approximately 750' x 400' was impacted. A remedial response contractor was dispatched to the area that removed free liquids via a vacuum truck. Impacted vegetation (i.e. sage brush) will be addressed in the near term the results of which will be described in a supplemental report. The landowners were notified of the spill. The kill switch will be replaced then tested to prevent a recurrence.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|----------------|-------------|--|
| 7/12/2016 | COGCC | Kris Neidel | 970-8711963 | Informed Kris of the spill and our plans to remediate the affected area. |
| 7/14/2016 | CPWD | Michael Warren | 970-2556180 | Informed Him of the spill and our plans to remediate the affected area. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 07/14/2016 Email: charwell@sandridgeenergy.com

COA Type Description

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401077678 | FORM 19 SUBMITTED |

Total Attach: 1 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|---|--------------------------|
| Environmental | Supplemental report should include map that outlines spill impacted area. | 7/19/2016 12:32:39 PM |
| Environmental | CO wildlife officer, Josh Dilley was onsite to inspect the spills impact on the vegetation. | 7/19/2016 12:32:03 PM |
| Environmental | Confirmation samples will be taken at heaviest area of impacted soil (after visible contamination is removed). | 7/19/2016 12:31:54 PM |
| Environmental | Stained soil on pad should be removed. | 7/19/2016 12:31:45 PM |
| Environmental | Options for treating the spill were discussed with Sandridge Staff; Michael James, Grant Hues, Kellen McLaughlin. It was agreed that the best path forward was to scoop up any visibly impacted soil, removed and dispose of contaminated weeds and monitor impacts to sagebrush. | 7/19/2016 12:31:25 PM |
| Environmental | On 7/14/2016, COGCC environmental staff Kris Neidel performed an inspection of the spill at the Surprise 2-08H. Oil that was discharged from the well as a fine mist, the mist covered an area approximately 750' from the well to the east. There was no pooling of oil observed. The mist accumulated on the vegetation and appears as a film. Much of the impacted vegetation is invasive weeds. | 7/19/2016 11:43:05 AM |

Total: 6 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:30

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401082036

Date Received:

07/21/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

446739

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 5907483 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 5907483 |
| Contact Person: John Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401077678

| | | |
|---------------------------------|-------------------------------|--------------------------|
| Initial Report Date: 07/13/2016 | Date of Discovery: 07/12/2016 | Spill Type: Recent Spill |
|---------------------------------|-------------------------------|--------------------------|

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NENE SEC 8 TWP 6N RNG 80W MERIDIAN 6

Latitude: 40.511180 Longitude: -106.391600

Municipality (if within municipal boundaries): County: JACKSON

Reference Location:

Facility Type: WELL ☐ Facility/Location ID No ☐ No Existing Facility or Location ID No. ☒ Well API No. (Only if the reference facility is well) 05-057-06526

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

| | |
|--|---|
| Estimated Oil Spill Volume(bbl): >=5 and <100 | Estimated Condensate Spill Volume(bbl): 0 |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 |

Specify:

Land Use:

Current Land Use: NON-CROP LAND Other(Specify):

Weather Condition: Clear, Winds W 3-40 mph.

Surface Owner: FEE Other(Specify):

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

An inspection into the cause of the release at the Surprise 02-8H revealed that the rod packing was leaking which normally would be collected by the "e-pot". However, the e-pot's high level kill switch malfunctioned causing the pumping unit to repeatedly shut down and restart. This allowed the oil that was leaking past the rod packing to completely fill up the e-pot, resulting in oil to exit the top of the pumping tee as a mist. Due to wind speeds between 30-40 mph, the oil mist was carried off-site in an easterly direction and onto private land adjacent to the well site. An area estimated to be approximately 750' x 400' was impacted. A remedial response contractor was dispatched to the area that removed free liquids via a vacuum truck. Impacted vegetation (i.e. sage brush) will be addressed in the near term the results of which will be described in a supplemental report. The landowners were notified of the spill. The kill switch will be replaced then tested to prevent a recurrence.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|----------------|-------------|--|
| 7/12/2016 | COGCC | Kris Neidel | 970-8711963 | Informed Kris of the spill and our plans to remediate the affected area. |
| 7/14/2016 | CPWD | Michael Warren | 970-2556180 | Informed Him of the spill and our plans to remediate the affected area. |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--------------------------------------|--|--|
| #1 | Supplemental Report Date: 07/21/2016 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 8 | 2 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 0 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): 750 | | Width of Impact (feet): 400 | |
| Depth of Impact (feet BGS): 0 | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| A measuring wheel and GPS was used to determine the foot print of the spill. | | | |
| Soil/Geology Description: | | | |
| The site consists of sage brush and native grasses. | | | |
| Depth to Groundwater (feet BGS) 5 | | Number Water Wells within 1/2 mile radius: 0 | |
| If less than 1 mile, distance in feet to nearest | | Water Well 3392 None <input type="checkbox"/> | Surface Water 492 None <input type="checkbox"/> |
| | | Wetlands 375 None <input type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building _____ None <input checked="" type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | |

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:34

CORRECTIVE ACTIONS

| | | |
|--|---|---|
| #1 | Supplemental Report Date: | 07/21/2016 |
| Cause of Spill (Check all that apply) | | |
| <input type="checkbox"/> Human Error | <input checked="" type="checkbox"/> Equipment Failure | <input type="checkbox"/> Historical-Unknown |
| <input type="checkbox"/> Other (specify) _____ | | |
| Describe Incident & Root Cause (include specific equipment and point of failure) | | |
| <div>The high level kill switch inside the environmental pot, located on top of the pumping tee malfunctioned. The high level kill switch would shut down the pumping unit after the pot filled up with oil and then restart. This process repeated until the pumper shut the system down.</div> | | |
| Describe measures taken to prevent the problem(s) from reoccurring: | | |
| <div>An electrical group was brought in to test the kill switch to see why it failed. The kill switch was replaced and the pumping unit restarted and tested.</div> | | |
| Volume of Soil Excavated (cubic yards): 0 | | |
| Disposition of Excavated Soil (attach documentation) | | |
| <input type="checkbox"/> Offsite Disposal | <input type="checkbox"/> Onsite Treatment | |
| <input type="checkbox"/> Other (specify) _____ | | |
| Volume of Impacted Ground Water Removed (bbls): 0 | | |
| Volume of Impacted Surface Water Removed (bbls): 0 | | |

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure:

☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: John Harwell

Title: Remediation Supervisor Date: 07/21/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401082036 | FORM 19 SUBMITTED |
| 401082049 | AERIAL PHOTOGRAPH |

Total Attach: 2 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|--|-------------------------|
| Environmental | Sandridge should submit a Form 27 workplan outlining the monitoring of the sagebrush and documenting the clean-up. | 7/28/2016 2:55:02 PM |

| | | |
|---------------|--|-------------------------|
| Environmental | Discussions with the CPW and Sandridge; environmental staff, field staff, management and biologist it was determined that the best method of spill response is as follows...remove areas of heavier contamination of oil off of soil, remove vegetation (other than sagebrush) and disposed of as E&P waste. | 7/28/2016 1:31:39 PM |
| Environmental | Sandridge has been in contact with the CO Division of Wildlife regarding the spills impact on sagebrush, related to sage grouse. | 7/28/2016 1:31:32 PM |
| Environmental | Sandridge has been in contact with the two affected surface owners. | 7/28/2016 1:01:21 PM |

Total: 4 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:34

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401082894

Date Received:

07/22/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447026

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7483 |
| City: OKLAHOMA CITY | State: OK | Zip: 73102 |
| Contact Person: Clay Harwell | | Mobile: (405) 590-7483 |
| | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401082894

| | | |
|---|---|------------------------------------|
| Initial Report Date: 07/22/2016 | Date of Discovery: 07/22/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NWNE SEC 18 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.584322 | Longitude: -106.415828 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06536 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? | Yes | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? | No | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >0 and <1 | Estimated Condensate Spill Volume(bbl): | 0 |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): | 0 |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): | 0 |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 77 SSW 7 Mph Clear | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A oil transport driver was loading at the back of a 150 bbl tank trailer. He was standing near the bulk tank valve waiting on the digital gauge to reach 148 bbl so he could shut the bulk tank valve off. At 147.7 bbl on the gauge, oil started coming out of the vent on the tank trailer. The driver shut the bulk tank valve and the vent tube valve. He then shut down the pump and cleared the lines. About 1 bbl of oil was discharged onto the well site pad. A vacuum truck was dispatched to the site to remove the excess oil off of the ground surface. The affected soil was scraped up and hauled it to the Castle 2-17H20 and placed in a roll off container with E&P waste.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|-------------|--------------|--|
| 7/22/2016 | COGCC | Kris Neidel | 970-871-1963 | Micheal James contacted Mr. Kris Neidel and informed him of the spill. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell

Title: Remediation Supervisor Date: 07/22/2016 Email: charwell@sandridgeenergy.com

COA Type Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num Name

| | |
|-----------|-------------------|
| 401082894 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group Comment Comment Date

| | | |
|---------------|--|-------------------------|
| Environmental | supplemental report should included a map showing area of spill. | 7/28/2016 3:16:37 PM |
|---------------|--|-------------------------|

Total: 1 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE CENTER
2017 APR 10 AM 10:34

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401082436

Date Received:

07/22/2016

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

446983

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 5907483 |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 5907483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401082436

| | | |
|---|---|------------------------------------|
| Initial Report Date: 07/22/2016 | Date of Discovery: 07/21/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NWNW SEC 17 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.584244 | Longitude: -106.404519 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06542 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? | Yes | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? | Yes | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): >=100 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 66 Degrees Clear Skies, winds 2 mph | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During drilling operations of the Castle 0780 1-17H20, approximately 108 BBL of drilling mud was lost due to the cellar pump being turned off causing the discharge line that was in the opossum belly to be primed, this created a vacuum and syphoned drilling mud back into the cellar. Of the 108 BBL of drilling mud lost, approximately half filled the cellar with the remainder being released onto the well pad. Upon its discovery, the submersible pump's discharge line was removed from the possum belly to prevent any additional loss of mud. The drilling mud was subsequently removed from the cellar and well pad via a vacuum truck and reintroduced back into the active mud system. Clean-up crews removed impacted soil from the well pad and built berms around nearby equipment to prevent the mud from migrating back onto the remediated areas. Once the rig is moved, the crews will remove any remaining impacted soil that exists adjacent to or under the equipment.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|-------------|-------------|---|
| 7/21/2016 | COGCC | Kris Neidel | 970-8711963 | Michael James with SandRidge Energy informed Kris of the spill. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell

Title: Remediation Supervisor Date: 07/22/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401082436 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

| | | |
|---------------|--|-------------------------|
| Environmental | In conversation with Sandridge , it was discovered that; no fluid (mud) left the location, Mud was diesel based. | 7/27/2016 2:23:08 PM |
|---------------|--|-------------------------|

Total: 1 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:34

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401083990

Date Received:

07/26/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447027

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 5907483 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 5907483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401083990

| | | |
|---------------------------------|-------------------------------|--------------------------|
| Initial Report Date: 07/26/2016 | Date of Discovery: 07/24/2016 | Spill Type: Recent Spill |
|---------------------------------|-------------------------------|--------------------------|

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6

Latitude: 40.540160 Longitude: -106.391286

Municipality (if within municipal boundaries): County: JACKSON

Reference Location:

Facility Type: TANK BATTERY ☐ Facility/Location ID No ☐ No Existing Facility or Location ID No. ☒ Well API No. (Only if the reference facility is well) 05-057-06467

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

| | |
|--|---|
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 |
| Estimated Flow Back Fluid Spill Volume(bbl): >=100 | Estimated Produced Water Spill Volume(bbl): 0 |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 |

Specify:

Land Use:

Current Land Use: OTHER Other(Specify): swd with an office and laydown yard.

Weather Condition: Clear, light winds 66

Surface Owner: FEE Other(Specify):

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

The fluid outlet pump that takes the cleaned flowback water to the injection side grounded out, causing all fluid to go through the reject pump and into the slop tank. The slop / divert tank started at 7ft in the morning and overflowed by 11:30 pm out the top due to all the flowback water being diverted to it. The pump was shut off to the slop tank on the IFG skid for recycling flowback water to inject. A water hauling tanker was dispatched to pick up the 169 bbl that were inside the containment and place back into the flowback water side. The impacted area outside if the containment will be remediated. The spill was confined to the secondary containment except for 1 bbl that made it out. A total of 170 bbl of flowback water was spilled.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|--------------|--------------|---|
| 7/25/2016 | COGCC | Kris NBeidel | 970-871-1963 | Michael James contacted Kris and informed him of the spill. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 07/26/2016 Email: charwell@sandridgeenergy.com

COA Type Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num Name

| | |
|-----------|-------------------|
| 401083990 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group Comment Comment Date

| | | |
|---------------|---|-------------------------|
| Environmental | Supplemental report should include a map that outlines area of impact. | 7/28/2016 5:34:12 PM |
| Environmental | In discussion with Sandridge it is understood that the temporary tank with be removed from the facility in August. At the time of tank removal the area under the temporary secondary containment will be assessed. | 7/28/2016 5:32:55 PM |

Total: 2 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
2017 APR 10 AM 10:34

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401087974

Date Received:

08/02/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447186

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|--|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 225-6653</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Mobile: <u>()</u> |
| | | Email: <u>bdodek@bonanzacrk.c</u> <u>om</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401087974

| | | |
|--|--|------------------------------------|
| Initial Report Date: <u>08/02/2016</u> | Date of Discovery: <u>07/28/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR</u> <u>NESW</u> <u>SEC 34</u> <u>TWP 10N</u> <u>RNG 79W</u> <u>MERIDIAN 6</u> | | |
| Latitude: <u>40.793326</u> | Longitude: <u>-106.254302</u> | |
| Municipality (if within municipal boundaries): _____ | | County: <u>JACKSON</u> |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input checked="" type="checkbox"/> Facility/Location ID No <u>324648</u> | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-</u> <u>-</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | |
| Were Five (5) barrels or more spilled? <u>No</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=1 and <5</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>50 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| <i>As defined in COGCC 100-Series Rules</i> | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A flowline release of approximately 1.4 bbl of produced water surfaced above an injection flowline adjacent to the McCallum Unit 95 wellhead. The well has been shut-in and assessment of the impact is scheduled once utility locates are cleared. The release was reported on 8/2/16, when the release was determined to be above the 1 bbl reporting threshold. The total estimated release volume will not be known until the assessment is completed. Additional details will be provided in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| <u>Date</u> | <u>Agency/Party</u> | <u>Contact</u> | <u>Phone</u> | <u>Response</u> |
|-------------|---------------------|----------------|--------------|---------------------|
| 8/2/2016 | COGCC | Kris Neidel | -on file | Notified of release |
| 8/2/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 8/2/2016 | BLM | WIS-Online | -on file | Notified of release |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env. Supervisor Date: 08/02/2016 Email: bdodek@bonanzacrk.com

COA Type

Description

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401087974 | FORM 19 SUBMITTED |
| 401087990 | TOPOGRAPHIC MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|---------------|--|---------------------|
| Environmental | Please include a map showing flow path of produced water in supplemental report. | 3/5/2016 9:59:38 AM |
| Environmental | Operator should provide demonstration with flowline rule, 1101.e.upon request for closure. | 3/5/2016 9:58:12 AM |

Total: 2 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:34

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone (303) 894-2100 Fax (303) 894-2109



Document Number:

401092766

Date Received:

08/12/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447186

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|------------------------------------|--|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers Phone: <u>(720) 225-6653</u> Mobile: <u>()</u> Email: <u>bdodek@bonanzacrk.com</u> |
| Address: <u>410 17TH STREET SUITE #1400</u> | | |
| City: <u>DENVER</u> | State: <u>CO</u> Zip: <u>80202</u> | |
| Contact Person: <u>Brian Dodek</u> | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401087974

| | | |
|--|--|---------------------------------|
| Initial Report Date: <u>08/02/2016</u> | Date of Discovery: <u>07/28/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR</u> <u>NESW</u> SEC <u>34</u> TWP <u>10N</u> RNG <u>79W</u> MERIDIAN <u>6</u> | | |
| Latitude: <u>40.793326</u> Longitude: <u>-106.254302</u> | | |
| Municipality (if within municipal boundaries): _____ County: <u>JACKSON</u> | | |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input checked="" type="checkbox"/> Facility/Location ID No <u>324648</u> | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-</u> <u>-</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | |
| Were Five (5) barrels or more spilled? <u>No</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=1 and <5</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>50 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> Residence/Occupied Structure <input type="checkbox"/> Livestock <input type="checkbox"/> Public Byway <input type="checkbox"/> Surface Water Supply Area <input type="checkbox"/> | | |
| <i>As defined in COGCC 100-Series Rules</i> | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A flowline release of approximately 1.4 bbl of produced water surfaced above an injection flowline adjacent to the McCallum Unit 95 wellhead. The well has been shut-in and assessment of the impact is scheduled once utility locates are cleared. The release was reported on 8/2/16, when the release was determined to be above the 1 bbl reporting threshold. The total estimated release volume will not be known until the assessment is completed. Additional details will be provided in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|----------------|--------------|----------|---------------------|
| 8/2/2016 | COGCC | Kris Neidel | -on file | Notified of release |
| 8/2/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 8/2/2016 | BLM | WIS-Online | -on file | Notified of release |

SPILL/RELEASE DETAIL REPORTS

| #1 | Supplemental Report Date: | 08/12/2016 | |
|-----------------|---------------------------|------------------------|--------------------------|
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 1 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify: _____

Was spill/release completely contained within berms or secondary containment? NO Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): _____ Width of Impact (feet): _____

Depth of Impact (feet BGS): _____ Depth of Impact (inches BGS): _____

How was extent determined?

Extent was determined through visual delineation. Laboratory analytical results will also be used to confirm impact extent.

Soil/Geology Description:

Fluetsch-Tiagos association

Depth to Groundwater (feet BGS) 43 Number Water Wells within 1/2 mile radius: 0

If less than 1 mile, distance in feet to nearest

| | | | | | |
|------------|-----------------|--|-------------------|-----------------|--|
| Water Well | <u>3880</u> | None <input type="checkbox"/> | Surface Water | <u> </u> | None <input checked="" type="checkbox"/> |
| Wetlands | <u> </u> | None <input checked="" type="checkbox"/> | Springs | <u> </u> | None <input checked="" type="checkbox"/> |
| Livestock | <u> </u> | None <input checked="" type="checkbox"/> | Occupied Building | <u> </u> | None <input checked="" type="checkbox"/> |

Additional Spill Details Not Provided Above: _____

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:35

Bonanza has repaired the flowline and completed a successful flowline integrity test. Assessment of the spill area is still underway and will be reported on a subsequent Form 19. The injection line that was the source of the release was a main injection line and was not related to the McCallum 95. The injection line simply passed by the McCallum 95 location.

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek

Title: Env Supervisor Date: 08/12/2016 Email: bdodek@bonanzacrk.com

COA Type

Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401092766 | FORM 19 SUBMITTED |
| 401092977 | SITE MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|---------------|--|-------------------------|
| Environmental | Operator should provide demonstration with flowline rule, 1101.e.upon request for closure. | 8/12/2016 3:51:55 PM |
| Environmental | Request for closure should include failure analysis of spill, including methods to prevent a similar spill from occurring. | 8/12/2016 3:51:52 PM |

Total: 2 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401089367

Date Received:

08/04/2016

Spill report taken by

NEIDEL KRIS

Spill/Release Point ID:

447238

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7383 |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| | Zip: 73102 | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401089367

| | | |
|---|---|------------------------------------|
| Initial Report Date: 08/04/2016 | Date of Discovery: 08/04/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 21 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.569537 | Longitude: -106.376011 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06531 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): >=5 and <100 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 63 and cloudy | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
2017 APR 10 AM 10:35

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A solids control crew member turned off the celler pump, but failed to turn off the water flow. This allowed the celler to fill up with water based mud (WBM) and overflow onto the drilling pad. The WBM was mixed with dry soil, scooped up and deposited into the cuttings bin. Approximately 6 bbl of WBM was released and recovered.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|------|--------------|-------------|--------------|--|
| | COGCC | Kris Neidel | 970-871-1963 | I notified Kris via an email spill report. |

OPERATOR COMMENTS:

| |
|--|
| |
|--|

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell

Title: Remediation Supervisor Date: 08/04/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401089367 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|--|
| | | |
|--|--|--|

Total: 0 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401088818

Date Received:

08/04/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447185

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|--|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 225-6653</u> |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u> | | Mobile: <u>()</u> |
| Contact Person: <u>Brian Dodek</u> | | Email: <u>bdodek@bonanzacrk.c</u> <u>om</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401088818

| | | |
|--|---|---------------------------------|
| Initial Report Date: <u>08/03/2016</u> | Date of Discovery: <u>07/28/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR NENE SEC 13 TWP 9n RNG 79w MERIDIAN</u> | U.S. DEPT OF INTERIOR BUREAU OF LAND MGMT COLORADO STATE OFFICE DENVER 2017 APR 10 AM 10:35 | |
| Latitude: <u>40.756420</u> Longitude: <u>-106.208360</u> | | |
| Municipality (if within municipal boundaries): _____ | | |
| County: <u>JACKSON</u> | | |
| Reference Location: | | |
| Facility Type: <u>WELL</u> | <input type="checkbox"/> Facility/Location ID No _____ <input type="checkbox"/> No Existing Facility or Location ID No. <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-057-06362</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? <u>No</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=1 and <5</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>66 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> Residence/Occupied Structure <input type="checkbox"/> Livestock <input type="checkbox"/> Public Byway <input type="checkbox"/> Surface Water Supply Area <input type="checkbox"/> As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During an inspection on 8/2/16, personnel observed a leaking wellhead on location. Response personnel repaired the wellhead and stopped the release. Environmental personnel will collect confirmation soil samples once the impacted soil is removed from the area surrounding the wellhead. Bonanza Creek anticipates the release volume is above 1 bbl of produced water. On 8/3/16, Bonanza Creek determined the release likely exceeds the 1 bbl reporting threshold. The release was reported that day. The final release volume will be determined after the excavation is completed.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| <u>Date</u> | <u>Agency/Party</u> | <u>Contact</u> | <u>Phone</u> | <u>Response</u> |
|-------------|---------------------|----------------|--------------|---------------------|
| 8/3/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 8/4/2016 | BLM | On file | -on file | Notified of release |
| 8/3/2016 | COGCC | Kris Neidel | -on file | Notified of release |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env Supervisor Date: 08/04/2016 Email: bdodek@bonanzacrk.com

COA Type **Description**

| | |
|--|--|
| | |
|--|--|

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------|
| 401088818 | FORM 19 SUBMITTED |
| 401088912 | TOPOGRAPHIC MAP |

Total Attach: 2 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | |

Total: 0 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401092845

Date Received:

08/12/2016

Spill report taken by

NEIDEL KRIS

Spill/Release Point ID:

447185

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|--|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 225-6653</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Email: <u>bdodek@bonanzacrk.c</u> <u>om</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401088818

| | | |
|--|---|------------------------------------|
| Initial Report Date: <u>08/03/2016</u> | Date of Discovery: <u>07/28/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR NENE SEC 13 TWP 9n RNG 79w MERIDIAN</u> | 2017 APR 10 AM 10:35 U.S. DEPT OF INTERIOR BUREAU OF LAND MGMT COLORADO STATE OFFICE DENVER | |
| Latitude: <u>40.756420</u> Longitude: <u>-106.208360</u> | | |
| Municipality (if within municipal boundaries): _____ | | |
| County: <u>JACKSON</u> | | |
| Reference Location: | | |
| Facility Type: <u>WELL</u> | <input type="checkbox"/> Facility/Location ID No _____ | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-057-06362</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | |
| Were Five (5) barrels or more spilled? <u>No</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=1 and <5</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>66 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| <i>As defined in COGCC 100-Series Rules</i> | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During an inspection on 8/2/16, personnel observed a leaking wellhead on location. Response personnel repaired the wellhead and stopped the release. Environmental personnel will collect confirmation soil samples once the impacted soil is removed from the area surrounding the wellhead. Bonanza Creek anticipates the release volume is above 1 bbl of produced water. On 8/3/16, Bonanza Creek determined the release likely exceeds the 1 bbl reporting threshold. The release was reported that day. The final release volume will be determined after the excavation is completed.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|----------|----------------|--------------|----------|---------------------|
| 8/3/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 8/4/2016 | BLM | On file | -on file | Notified of release |
| 8/3/2016 | COGCC | Kris Neidel | -on file | Notified of release |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--------------------------------------|---|--|
| #1 | Supplemental Report Date: 08/12/2016 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | | | <input checked="" type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): _____ | | Width of Impact (feet): _____ | |
| Depth of Impact (feet BGS): _____ | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| The extent was determined by visual delineation. During assessment laboratory analysis will also be used to confirm the extent. | | | |
| Soil/Geology Description: | | | |
| Fluetsch-Tiagos association | | | |
| Depth to Groundwater (feet BGS) <u>32</u> | | Number Water Wells within 1/2 mile radius: <u>5</u> | |
| If less than 1 mile, distance in feet to nearest | | Water Well <u>710</u> None <input type="checkbox"/> | Surface Water _____ None <input checked="" type="checkbox"/> |
| | Wetlands _____ | None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | Livestock _____ | None <input checked="" type="checkbox"/> | Occupied Building _____ None <input checked="" type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | |

Bonanza has repaired the leak and has scheduled assessment of the impact surface soil. Results of the assessment will be submitted in a subsequent Form 19.

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek

Title: Env Supervisor Date: 08/12/2016 Email: bdodek@bonanzacrk.com

COA Type Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401092845 | FORM 19 SUBMITTED |
| 401092963 | SITE MAP |

Total Attach: 2 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|--|-------------------------|
| Environmental | request for closure should include failure analysis of spill, including methods to prevent a similar spill from occurring. | 8/12/2016 3:49:08 PM |

Total: 1 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:35

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401092848

Date Received:

08/12/2016

Spill report taken by:

FISCHER, ALEX

Spill/Release Point ID:

447296

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7483 |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 590-7483 |
| Zip: 73102 | | Email: charwell@sandridgeenergy.com |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401092848

| | | |
|---|---|------------------------------------|
| Initial Report Date: 08/12/2016 | Date of Discovery: 08/04/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NWNW SEC 17 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.584656 | Longitude: -106.404444 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06541 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? No | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=1 and <5 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: Clear and 71 | | |
| Surface Owner: FEE | Other(Specify): | |
| Check If Impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

While moving a frac tank on the Mutual 0780 4-8H to allow for COGCC spacing of the Mutual 7-17H flare, the rear valve handle hung up on the containment which in turn opened the valve. About 2 bbl of produced water was released onto the location. All of the spilled production water and affected soils have been removed and a plug was put in to replaced the valve. The affected soils were placed into the roll off containers on the location and hauled off with other waste. The spill never made it off of the site.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|--------------|-------------|--------------|--|
| 8/12/2016 | COGCC | Kris Neidel | 970-871-1963 | Mr. Michael James contacted Mr. Neidel to inform him of the spill. |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 08/12/2016 Email: charwell@sandridgeenergy.com

COA Type Description

| | |
|--|--|
| | |
|--|--|

Attachment Check List

Att Doc Num Name

401092848 FORM 19 SUBMITTED

Total Attach: 1 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|--|--------------------------|
| Environmental | Operator to follow up with closure request. | 8/15/2016 12:41:50 PM |
| Environmental | Spill/Release occurred August 4, 2016, COGCC was notified August 12, 2016. | 8/15/2016 12:39:25 PM |

Total: 2 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND HIGHT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:35



COLORADO
Oil & Gas Conservation
Commission
Department of Natural Resources
1120 Lincoln Street, Suite 801
Denver, CO 80203

Spill/Release ID# 447296
Document #: 2452984
Date: 10/06/2016

WARNING LETTER # 401124421

10/06/2016

SANDRIDGE EXPLORATION & PRODUCTION LLC (# 10598)

Attn: Linda McDonald

123 ROBERT S KERR AVE
OKLAHOMA CITY, OK 73102

lmcdonald@sandridgeenergy.com
Mutual 0780 4-8H (API# 057-06541)
NWNW, 17, 7N, 80W, JACKSON

This Warning Letter is to inform you that SANDRIDGE EXPLORATION & PRODUCTION LLC ("Operator") may be in violation of the rules and regulations of the Colorado Oil and Gas Conservation Commission ("COGCC") and corrective action is required.

The COGCC has reasonable cause to believe that the Operator has committed one or more violations of the Oil and Gas Conservation Act, or of a rule, regulation, or order of the Commission, or of a permit issued by the Commission. The Operator is required to comply with this Warning Letter by the **Corrective Action Deadline Date(s)** to resolve the alleged violation(s). Failure to do so will result in the issuance of a Notice of Alleged Violation and initiation of enforcement proceedings in which COGCC will seek monetary penalties for the alleged violations pursuant to § 34-60-121, C.R.S. and Rule 523, COGCC Rules of Practice and Procedure, 2 CCR 404-I.

Alleged Violation(s) and Required Corrective Action(s):

906.b Spill Reporting

Description of Alleged Violation: Pursuant to Rule 906.b., Sandridge Exploration & Production LLC (Operator) is required to report spills or releases of one (1) or more barrels of E&P Waste or produced fluids outside of berms or secondary containment to the COGCC within twenty-four (24) hours of discovery and a Form 19, Initial Spill/Release Report, must be submitted to COGCC within 72 hours.

While moving a frac tank on the Mutual #0780 4-8H well, API 057-06541, (Well) on August 4, 2016, approximately two (2) barrels of produced water were released outside of secondary containment. Operator failed to notify the COGCC and submit a Form 19, Initial Spill/Release Report, until August 12, 2016 (Document #401092848), violating Rule 906.b. On September 12, 2016, COGCC staff conducted an inspection of the spill/release area and observed that no remaining impact at the area of the spill was detectable (Document #685100062).



**COLORADO**Oil & Gas Conservation
Commission

Department of Natural Resources

1120 Lincoln Street, Suite 801
Denver, CO 80203

Required Corrective Action: Operator shall submit a Form 4, Sundry Notice, providing of an explanation of the process Operator will use to timely report any spills or releases to the COGCC and comply with Rule 906.b. in the future.

Corrective Action Deadline Date: 11/07/2016

How to Comply with Warning Letter:

Operator shall complete the Required Corrective Action(s) above within the deadline(s) provided. Upon completion of the Corrective Action(s), Operator shall provide notice and evidence of completion to the COGCC staff identified below by the Corrective Action Deadline Date(s):

COGCC Enforcement: Steven Mah

Email: Steven.Mah@state.co.us

Title: NOAV Specialist

Phone Num: (303) 894-2100 x5159

COGCC Representative: Alex Fischer

Email: alex.fischer@state.co.us

Title: West Environmental Supervisor

Phone Num: (303) 894-2100x5138

If you have any procedural questions about this Warning Letter, please contact Steven Mah.

If you have any technical questions about this Warning Letter, please contact the COGCC Representative identified above.

Failure to Comply with Warning Letter:

If the Operator fails to perform Required Corrective Action(s) on or before the Corrective Action Deadline Date(s) stated above the COGCC will issue a Notice of Alleged Violation and seek penalties pursuant to § 34-60-121, C.R.S. and Rule 523, COGCC Rules of Practice and Procedure, 2 CCR 404-1.

All well data, rules and forms are available on our website at www.colorado.gov/cogcc.

Sincerely,

Alex Fischer

West Environmental Supervisor

(303) 894-2100x5138

alex.fischer@state.co.us**Attachments**

View Attachments in Imaged Documents on COGCC website <http://ogccweblink.state.co.us/> Search by Document Number.

Document Number Description

| | |
|-----------|---------------------------------------|
| 401125310 | WARNING LETTER CERTIFIED MAIL RECEIPT |
|-----------|---------------------------------------|

Total Attach: 1 Files

2017 APR 10 AM 10:35
U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401098818

Date Received:

08/24/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447431

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|------------------------------------|---|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers Phone: <u>(720) 225-6653</u> Mobile: <u>()</u> Email: <u>bdodek@bonanzacrk.com</u> |
| Address: <u>410 17TH STREET SUITE #1400</u> | | |
| City: <u>DENVER</u> | State: <u>CO</u> Zip: <u>80202</u> | |
| Contact Person: <u>Brian Dodek</u> | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401098818

Initial Report Date: 08/24/2016 Date of Discovery: 08/23/2016 Spill Type: Recent Spill

Spill/Release Point Location:

Location of Spill/Release: QTRQTR SENE SEC 3 TWP 9N RNG 79W MERIDIAN 6

Latitude: 40.782165 Longitude: -106.244577

Municipality (if within municipal boundaries): _____ County: JACKSON

Reference Location:

Facility Type: FLOWLINE
☐ Facility/Location ID No _____

☒ No Existing Facility or Location ID No.

☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0

Estimated Condensate Spill Volume(bbl): 0

Estimated Flow Back Fluid Spill Volume(bbl): 0

Estimated Produced Water Spill Volume(bbl): >=5 and <100

Estimated Other E&P Waste Spill Volume(bbl): 0

Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: _____

Land Use:

Current Land Use: NON-CROP LAND

Other(Specify): _____

Weather Condition: 61 degrees, clear

Surface Owner: FEDERAL

Other(Specify): _____

Check if Impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened – including how it was stopped, contained, and recovered):

An injection flowline release was observed in a flowline right of way. The injection line and associated well were shut-in immediately. It is estimated that approximately 20 bbl of produced water were released. Environmental personnel will conduct a site assessment as soon as utility locates clear. Assessment details and analytical results will be submitted in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------|
| 8/24/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 8/24/2016 | COGCC | Kris Neidel | -on file | Notified of release |
| 8/24/2016 | Landowner | BLM | -on file | Notified of release |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env Supervisor Date: 08/24/2016 Email: bdodek@bonanzacrk.com

COA Type Description

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401098818 | FORM 19 SUBMITTED |
| 401098828 | TOPOGRAPHIC MAP |

Total Attach: 2 Files

General Comments

| User Group | Comment | Comment Date |
|------------|---------|--------------|
| | | |

Total: 0 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE CENTER
2017 APR 10 AM 10:35

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401103318

Date Received:

09/02/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447431

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|------------------------------------|--|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers Phone: <u>(720) 225-6653</u> Mobile: <u>()</u> Email: <u>bdodek@bonanzacrk.c</u> <u>om</u> |
| Address: <u>410 17TH STREET SUITE #1400</u> | | |
| City: <u>DENVER</u> | State: <u>CO</u> Zip: <u>80202</u> | |
| Contact Person: <u>Brian Dodek</u> | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401098818

| | | |
|--|--------------------------------------|---------------------------------|
| Initial Report Date: <u>08/24/2016</u> | Date of Discovery: <u>08/23/2016</u> | Spill Type: <u>Recent Spill</u> |
|--|--------------------------------------|---------------------------------|

Spill/Release Point Location:

Location of Spill/Release: QTRQTR SENE SEC 3 TWP 9N RNG 79W MERIDIAN 6

Latitude: 40.782165 Longitude: -106.244577

Municipality (if within municipal boundaries): _____ County: JACKSON

Reference Location:

Facility Type: FLOWLINE ☐ Facility/Location ID No _____

☒ No Existing Facility or Location ID No.

☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

| | |
|---|---|
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=5 and <100</u> |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> |

Specify: _____

Land Use:

Current Land Use: NON-CROP LAND Other(Specify): _____

Weather Condition: 61 degrees, clear

Surface Owner: FEDERAL Other(Specify): _____

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

An injection flowline release was observed in a flowline right of way. The injection line and associated well were shut-in immediately. It is estimated that approximately 20 bbl of produced water were released. Environmental personnel will conduct a site assessment as soon as utility locates clear. Assessment details and analytical results will be submitted in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------|
| 8/24/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 8/24/2016 | COGCC | Kris Neidel | -on file | Notified of release |
| 8/24/2016 | Landowner | BLM | -on file | Notified of release |

SPILL/RELEASE DETAIL REPORTS

#1 Supplemental Report Date: 09/02/2016

| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
|-----------------|---------------|-----------------|--------------------------|
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 20 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify: _____

Was spill/release completely contained within berms or secondary containment? NO Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 190

Width of Impact (feet): 20

Depth of Impact (feet BGS): _____

Depth of Impact (Inches BGS): _____

How was extent determined?

The extent of impact was determined by visual delineation. Impact will be further defined by field screening and laboratory analysis during remediation.

Soil/Geology Description:

Bosler Sandy Loam

Depth to Groundwater (feet BGS) 20

Number Water Wells within 1/2 mile radius: 0

If less than 1 mile, distance in feet to nearest

Water Well _____ None ☒

Surface Water _____ None ☒

Wetlands _____ None ☒

Springs _____ None ☒

Livestock _____ None ☒

Occupied Building 3480 None ☐

Additional Spill Details Not Provided Above:

2017 APR 10 AM 10:35

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE DENVER

BCEOC is currently waiting on utilities to clear to begin assessment and remediation of the spill area. The flowline will be repaired and confirmation soil samples will be collected from the spill footprint. Additional details regarding the release will be submitted in a subsequent Form 19. A number of wells appear west of the location in the DWR database, these are monitoring wells and not water wells.

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek

Title: Env Supervisor Date: 09/02/2016 Email: bdodek@bonanzacrk.com

COA Type

Description

| | |
|--|--|
| | Please provide notice to COGCC staff, Kris Neidel at time of collecting soil samples. 970-871-1963 or Kris.Neidel@state.co.us |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401103318 | FORM 19 SUBMITTED |
| 401103491 | SITE MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|--|
| | | |
|--|--|--|

Total: 0 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401114538

Date Received:

09/19/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

447810

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 225-6653</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Email: <u>bdodek@bonanzacrk.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401114538

| | | |
|--|---|------------------------------------|
| Initial Report Date: <u>09/19/2016</u> | Date of Discovery: <u>09/19/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR SENW SEC 2 TWP 9N RNG 79W MERIDIAN 6</u> | | |
| Latitude: <u>40.781105</u> | Longitude: <u>-106.236900</u> | |
| Municipality (if within municipal boundaries): _____ | County: <u>JACKSON</u> | |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input type="checkbox"/> Facility/Location ID No _____ | |
| | <input checked="" type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05- -</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | |
| Were Five (5) barrels or more spilled? <u>Yes</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>>0 and <1</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=5 and <100</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>38 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| <i>As defined in COGCC 100-Series Rules</i> | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:35

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During production a flowline release was observed along a flowline ROW. The release occurred on the McCallum Unit 73 flowline. The well was shut-in immediately and 25 bbls of fluid were recovered via vacuum truck. It is currently estimated that 40 bbl of produced water with oil were released. Flowline excavation and repair will occur after utility locates clear. Environmental personnel will collect soil samples from the excavation to confirm the remaining soil is compliant with COGCC Table 910-1 standards. Additional information will be submitted in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------|
| 9/19/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 9/19/2016 | Landowner | BLM | -on file | Notified of release |
| 9/19/2016 | COGCC | Kris Neidel | -on file | Notified of release |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env Supervisor Date: 09/19/2016 Email: bdodek@bonanzacrk.com

COA Type

Description

| | |
|--|---|
| | Prior to requesting closure, a Failure analysis, including root causes analysis of the spill should be included. Provide all pipeline integrity data to the COGC Pipeline Supervisor, Mark Schlagenhauf, at (303) 894-2100 x5177 or mark.schlagenhauf@state.co.us |
|--|---|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401114538 | FORM 19 SUBMITTED |
| 401114543 | TOPOGRAPHIC MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|---------------|---|-------------------------|
| Environmental | Per discussion with Mr. Dodek, spill did NOT impact or come within 800' of any surface monitoring well. | 9/20/2016 9:27:50 AM |
|---------------|---|-------------------------|

Total: 1 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401121083

Date Received:

09/29/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

447810

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 225-6653</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Mobile: <u>()</u> |
| | | Email: <u>bdodek@bonanzacrk.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401114538

| | | |
|--|--|------------------------------------|
| Initial Report Date: <u>09/19/2016</u> | Date of Discovery: <u>09/19/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR</u> <u>SE</u> <u>W</u> <u>SEC</u> <u>2</u> <u>TWP</u> <u>9N</u> <u>RNG</u> <u>79W</u> <u>MERIDIAN</u> <u>6</u> | | |
| Latitude: <u>40.781105</u> | Longitude: <u>-106.236900</u> | |
| Municipality (if within municipal boundaries): _____ | County: <u>JACKSON</u> | |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input type="checkbox"/> Facility/Location ID No _____ | |
| | <input checked="" type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-</u> <u>-</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | |
| Were Five (5) barrels or more spilled? <u>Yes</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>>0 and <1</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=5 and <100</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>38 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| <i>As defined in COGCC 100-Series Rules</i> | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE
 DENVER
 2017 APR 10 AM 10:35

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During production a flowline release was observed along a flowline ROW. The release occurred on the McCallum Unit 73 flowline. The well was shut-in immediately and 25 bbls of fluid were recovered via vacuum truck. It is currently estimated that 40 bbl of produced water with oil were released. Flowline excavation and repair will occur after utility locates clear. Environmental personnel will collect soil samples from the excavation to confirm the remaining soil is compliant with COGCC Table 910-1 standards. Additional information will be submitted in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------|
| 9/19/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 9/19/2016 | Landowner | BLM | -on file | Notified of release |
| 9/19/2016 | COGCC | Kris Neidel | -on file | Notified of release |

SPILL/RELEASE DETAIL REPORTS

| | | | | | |
|---|---------------------------|------------------------|--|-------------------|--|
| #1 | Supplemental Report Date: | 09/29/2016 | | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown | | |
| OIL | 0 | 0 | <input type="checkbox"/> | | |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> | | |
| PRODUCED WATER | 39 | 39 | <input type="checkbox"/> | | |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> | | |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> | | |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> | | |
| specify: _____ | | | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | | | |
| Surface Area Impacted: Length of Impact (feet): | | 30 | Width of Impact (feet): 5 | | |
| Depth of Impact (feet BGS): | | 4 | Depth of Impact (inches BGS): _____ | | |
| How was extent determined? | | | | | |
| The current extent was determined by visual delineation during excavation to repair the corroded flowline. Assessment is not yet complete and delineation will be conducted by field screening and laboratory analysis. | | | | | |
| Soil/Geology Description: | | | | | |
| Bosler sandy loam | | | | | |
| Depth to Groundwater (feet BGS) | | 20 | Number Water Wells within 1/2 mile radius: 0 | | |
| If less than 1 mile, distance in feet to nearest | | Water Well | None <input checked="" type="checkbox"/> | Surface Water | None <input checked="" type="checkbox"/> |
| | | Wetlands | None <input checked="" type="checkbox"/> | Springs | None <input checked="" type="checkbox"/> |
| | | Livestock | None <input checked="" type="checkbox"/> | Occupied Building | 1440 None <input type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | | | |

BCEI has repaired the flowline. BCEI has not yet completed the excavation of impacted soil. Assessment will continue the week of 10/3/16. There are no water wells within a mile. All DWR wells are monitoring wells. Additional results will be submitted in a supplemental Form 19. The release location GPS point should be changed to 40.781180, -106.237328.

CORRECTIVE ACTIONS

| | | | | |
|---|---------------------------|--|---|---|
| #1 | Supplemental Report Date: | 09/29/2016 | | |
| Cause of Spill (Check all that apply) | | <input type="checkbox"/> Human Error | <input checked="" type="checkbox"/> Equipment Failure | <input type="checkbox"/> Historical-Unknown |
| | | <input type="checkbox"/> Other (specify) | | |
| Describe Incident & Root Cause (include specific equipment and point of failure) | | | | |
| The cause of the release was determined to be internal corrosion on a steel flowline. The flowline has been repaired and was successfully pressure tested. | | | | |
| Describe measures taken to prevent the problem(s) from reoccurring: | | | | |
| BCEI is currently working the landowner (BLM) to install a new poly flowline to avoid future releases. It is expected the new line will be installed in October 2016. | | | | |
| Volume of Soil Excavated (cubic yards): | | 25 | | |
| Disposition of Excavated Soil (attach documentation) | | <input checked="" type="checkbox"/> Offsite Disposal | <input type="checkbox"/> Onsite Treatment | |
| | | <input type="checkbox"/> Other (specify) | | |
| Volume of Impacted Ground Water Removed (bbls): | | 0 | | |
| Volume of Impacted Surface Water Removed (bbls): | | 0 | | |

U.S. DEPT. OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
2017 APR 10 AM 10:35

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)
☐ Work proceeding under an approved Form 27
Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env Supervisor Date: 09/29/2016 Email: bdodek@bonanzacrk.com

COA Type

Description

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401121083 | FORM 19 SUBMITTED |
| 401121135 | SITE MAP |

Total Attach: 2 Files

General Comments

| User Group | Comment | Comment Date |
|-------------------|--|--------------------------|
| Environmental | Lat/Long of spill/discharge point updated in COGCC database based on information provied here. | 10/3/2016 11:50:46 AM |

Total: 1 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401160555

Date Received:

12/05/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

447810

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 225-6653</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Email: <u>bdodek@bonanzacrk.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401114538

| | | |
|--|--|------------------------------------|
| Initial Report Date: <u>09/19/2016</u> | Date of Discovery: <u>09/19/2016</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR SENW SEC 2 TWP 9N RNG 79W MERIDIAN 6</u> | U.S. DEPT OF INTERIOR BUREAU OF LAND MGMT CO STATE OFFICE DENVER 2017 APR 10 AM 10:42 | |
| Latitude: <u>40.781105</u> Longitude: <u>-106.236900</u> | | |
| Municipality (if within municipal boundaries): _____ | | |
| County: <u>JACKSON</u> | | |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input type="checkbox"/> Facility/Location ID No _____ | |
| | <input checked="" type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-</u> <u>-</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | |
| Were Five (5) barrels or more spilled? <u>Yes</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>>0 and <1</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=5 and <100</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>38 degrees and clear</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| <i>As defined in COGCC 100-Series Rules</i> | | |

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During production a flowline release was observed along a flowline ROW. The release occurred on the McCallum Unit 73 flowline. The well was shut-in immediately and 25 bbls of fluid were recovered via vacuum truck. It is currently estimated that 40 bbl of produced water with oil were released. Flowline excavation and repair will occur after utility locates clear. Environmental personnel will collect soil samples from the excavation to confirm the remaining soil is compliant with COGCC Table 910-1 standards. Additional information will be submitted in a subsequent Form 19.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------|
| 9/19/2016 | Jackson County | Kent Crowder | -on file | Notified of release |
| 9/19/2016 | Landowner | BLM | -on file | Notified of release |
| 9/19/2016 | COGCC | Kris Neidel | -on file | Notified of release |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--------------------------------------|---|--|
| #1 | Supplemental Report Date: 12/05/2016 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 39 | 39 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): <u>18</u> | | Width of Impact (feet): <u>10</u> | |
| Depth of Impact (feet BGS): <u>8</u> | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| Extent was determined via visual delineation, field screening, and laboratory analysis. | | | |
| Soil/Geology Description: | | | |
| Bosler sandy loam | | | |
| Depth to Groundwater (feet BGS) <u>20</u> | | Number Water Wells within 1/2 mile radius: <u>0</u> | |
| If less than 1 mile, distance in feet to nearest | | Water Well _____ None <input checked="" type="checkbox"/> | Surface Water _____ None <input checked="" type="checkbox"/> |
| | | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building <u>1440</u> None <input type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | |

Following flowline repair and pressure testing, BCEOC completed excavation of impacted soil. Laboratory analysis of soil samples confirmed that the remaining soil is compliant with COGCC Table 910-1 standards. Impacted soil was transported to the BCEOC land treatment facility. As laboratory analysis confirmed remaining soil is compliant, Bonanza Creek requests a No Further Action determination.

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 12/05/2016

Cause of Spill (Check all that apply) ☐ Human Error ☒ Equipment Failure ☐ Historical-Unknown
☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

The cause of the release was determined to be internal corrosion on a steel flowline.

Describe measures taken to prevent the problem(s) from reoccurring:

BCEI completed installation a new poly flowline to avoid future releases. The new flowline was installed to connect to McCallum Unit 154 instead of using the previous ROW.

Volume of Soil Excavated (cubic yards): 53

Disposition of Excavated Soil (attach documentation) ☒ Offsite Disposal ☐ Onsite Treatment
☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): 0

Volume of Impacted Surface Water Removed (bbls): 0

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)
☐ Work proceeding under an approved Form 27
Form 27 Remediation Project No: _____

U.S. DEPT. OF INTERIOR
BUREAU OF LAND MGMT.
COLORADO STATE OFFICE DENVER
2016 APR 10 AM 10:42

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env Supervisor Date: 12/05/2016 Email: bdodek@bonanzacrk.com

COA Type

Description

| | |
|--|--|
| | Based on review of information presented here, No Further Action is required at this time. Should conditions at the site indicate contaminant concentrations in soils exceed COGCC standards, further investigation and/or remediation activities may be required at the site. |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401160555 | FORM 19 SUBMITTED |
| 401160656 | OTHER |

Total Attach: 2 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401139346

Date Received:

10/31/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

448240

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7483 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401139346

| | | |
|---|---|------------------------------------|
| Initial Report Date: 10/31/2016 | Date of Discovery: 10/28/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540160 Longitude: -106.391286 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WATER GATHERING SYSTEM/LINE | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06467 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 63 clear 21 mph winds | | |
| Surface Owner: FEE | Other(Specify): | |
| Check If Impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MGMT
 COLORADO STATE OFFICE CHRYSLER
 2017 APR 10 AM 10:42

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A pump inside of the recycle skid malfunctioned causing a tank to overrun inside of the unit. The spill was 220 bbls of produced water and 1 bbls of oil. All of the spill was contained inside of lined secondary containment. The unit will be repaired and we will use the flow hands to operate/monitor the unit. We are going to see if we can just use the sand filter on site to treat this water and eliminate the recycle skid from our process.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|------------|--------------|-----------------|--------------|--|
| 10/28/2016 | COGCC | Mr. Kris Neidel | 970-871-1963 | Notified Mr. Neidel of the Spill on 10/28/2016 |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 10/31/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | If no soils have been impacted and all of spill was contained in lined containment, the operator may request 'no further action' of spill, once all of the above conditions have been met. |
| | Per rule 906.b(2) and 906.b(3), notice should be given to the surface owner and local government, no notices were listed. Please report these notices on the supplemental report. |
| | Supplemental report should provide final disposition of the spilled fluid. |
| | Supplemental report should provide details on spill clean-up. |

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401139346 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|--|
| | | |
|--|--|--|

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401144529

Date Received:

11/08/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

448240

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7483 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401139346

| | | |
|---|--|------------------------------------|
| Initial Report Date: 10/31/2016 | Date of Discovery: 10/28/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540160 Longitude: -106.391286 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WATER GATHERING SYSTEM/LINE | <input type="checkbox"/> Facility/Location ID No <input type="checkbox"/> No Existing Facility or Location ID No. <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) 05-057-06467 | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 63 clear 21 mph winds | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT. OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:42

Describe what is known about the spill/release event (what happened – including how it was stopped, contained, and recovered):

A pump inside of the recycle skid malfunctioned causing a tank to overrun inside of the unit. The spill was 220 bbls of produced water and 1 bbls of oil. All of the spill was contained inside of lined secondary containment. The unit will be repaired and we will use the flow hands to operate/monitor the unit. We are going to see if we can just use the sand filter on site to treat this water and eliminate the recycle skid from our process.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|------------|--------------|-----------------|--------------|--|
| 10/28/2016 | COGCC | Mr. Kris Neidel | 970-871-1963 | Notified Mr. Neidel of the Spill on 10/28/2016 |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|---|--|--------------------------|
| #1 | Supplemental Report Date: 11/08/2016 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 1 | 1 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 220 | 220 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>YES</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): _____ | | Width of Impact (feet): _____ | |
| Depth of Impact (feet BGS): _____ | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| Due to the fact that the spill was confined within a lined secondary containment system, the extent of the spill was limited to the containment system. | | | |
| Soil/Geology Description: | | | |
| Due to the fact that the spill was confined within a lined secondary containment system, underlying soil was not impacted. | | | |
| Depth to Groundwater (feet BGS) <u>17</u> | | Number Water Wells within 1/2 mile radius: <u>2</u> | |
| If less than 1 mile, distance in feet to nearest | Water Well <u>500</u> None <input type="checkbox"/> | Surface Water <u>513</u> None <input type="checkbox"/> | |
| | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> | |
| | Livestock <u>1000</u> None <input type="checkbox"/> | Occupied Building <u>500</u> None <input type="checkbox"/> | |
| Additional Spill Details Not Provided Above: | | | |
| All fluids that were released into the lined secondary containment system were removed and disposed via the Vaneta injection well. | | | |

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 10/28/2016

Cause of Spill (Check all that apply) ☐ Human Error ☒ Equipment Failure ☐ Historical-Unknown
☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

A pump associated with the facility's induced gas floatation (IGF) system malfunctioned causing a storage tank to overrun and release produced water and residual oil into a lined secondary containment system.

Describe measures taken to prevent the problem(s) from reoccurring:

The IGF system has since been removed from service thereby eliminating any future failure and will be replaced with a sand filter to remove suspended matter from the produced water destined for disposal via the Vaneta injection well.

Volume of Soil Excavated (cubic yards): 0

Disposition of Excavated Soil (attach documentation) ☐ Offsite Disposal ☐ Onsite Treatment
☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): 0

Volume of Impacted Surface Water Removed (bbls): 0

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO OFFICE
2017 APR 10 AM 10:12

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
 Title: Remediation Supervisor Date: 11/08/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | Based on the information presented, it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards, then further investigation and/or remediation activities may be required |
|--|--|

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401144529 | FORM 19 SUBMITTED |
| 401144723 | SITE MAP |
| 401144728 | TOPOGRAPHIC MAP |
| 401144730 | SITE MAP |

Total Attach: 4 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401161777

Date Received:

12/07/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

448601

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (580) 430-4605 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401161777

| | | |
|--|--|--------------------------|
| Initial Report Date: 12/06/2016 | Date of Discovery: 12/06/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540160 Longitude: -106.391286 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input type="checkbox"/> Facility/Location ID No <input type="checkbox"/> No Existing Facility or Location ID No. <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) 05-057-06467 | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: -20 F PARTLY CLOUDY | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> Residence/Occupied Structure <input type="checkbox"/> Livestock <input type="checkbox"/> Public Byway <input type="checkbox"/> Surface Water Supply Area <input type="checkbox"/> | | |
| As defined in COGCC 100-Series Rules | | |

2017 APR 10 AM 10:42
 BUREAU OF LAND MGMT
 COLORADO STATE OFFICE DENVER

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A pressure relief line froze and cracked due to extreme cold, causing production water to spill into lined containment. Replace the broken line, install heat trace and insulate piping.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------------|-------------------------|--------------|--------------------------------------|
| 12/6/2016 | CGOCC | Kris Nediel | 970-871-1963 | Was notified of the spill via email. |
| 12/6/2016 | Landowner | Jack and Vaneta Haworth | 970-723-4614 | Was notified by Mr. Doud SandRidge |
| 12/6/2016 | Jackson County Admin | Mr. Kent Crowder | 970-723-4660 | Was notified by Mr. Doud SandRidge |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell

Title: Remediation Manager Date: 12/07/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|---|
| | Lat/Long provided appears to be for the wellhead. Lat/Long on spill reports should be for the spill discharge point. Please provide location of spill discharge point on Supplemental Report. |
| | Supplemental report should describe the discrepancy between; spill fluid volume and recovered volume. It was reported that spill was inside lined containment. |

Attachment Check List

Att Doc Num Name

| | |
|-----------|-------------------|
| 401161777 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group Comment Comment Date

| | | |
|---------------|--|------------|
| Environmental | Spill was reported within 24 hours via email to COGCC. | 12/07/2016 |
|---------------|--|------------|

Total: 1 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401166350

Date Received:

12/13/2016

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

448601

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|----------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (580) 430-4605 |
| City: OKLAHOMA CITY | State: OK Zip: 73102 | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401161777

| | | |
|---|---|--|
| Initial Report Date: 12/06/2016 | Date of Discovery: 12/06/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540160 | Longitude: -106.391286 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06467 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: -20 F PARTLY CLOUDY | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| | Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MGMT
 COLORADO OFFICE DEVER
 2017 APR 10 AM 10:2

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A pressure relief line froze and cracked due to extreme cold, causing production water to spill into lined containment. Replace the broken line, install heat trace and insulate piping.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------------|-------------------------|--------------|--------------------------------------|
| 12/6/2016 | CGOCC | Kris Nediel | 970-871-1963 | Was notified of the spill via email. |
| 12/6/2016 | Landowner | Jack and Vaneta Haworth | 970-723-4614 | Was notified by Mr. Doud SandRidge |
| 12/6/2016 | Jackson County Admin | Mr. Kent Crowder | 970-723-4660 | Was notified by Mr. Doud SandRidge |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--|---|--|
| #1 | Supplemental Report Date: 12/13/2016 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 25 | 25 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>YES</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): _____ | | Width of Impact (feet): _____ | |
| Depth of Impact (feet BGS): _____ | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| Due to the fact that the spill was confined within a lined secondary containment system, the extent of the spill was limited to the containment system. | | | |
| Soil/Geology Description: | | | |
| Due to the fact that the spill was confined within a lined secondary containment system, underlying soil was not impacted. | | | |
| Depth to Groundwater (feet BGS) <u>17</u> | | Number Water Wells within 1/2 mile radius: <u>2</u> | |
| If less than 1 mile, distance in feet to nearest | Water Well <u>500</u> | None <input type="checkbox"/> | Surface Water <u>513</u> None <input type="checkbox"/> |
| | Wetlands _____ | None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | Livestock <u>1000</u> | None <input type="checkbox"/> | Occupied Building <u>500</u> None <input type="checkbox"/> |
| | Additional Spill Details Not Provided Above: | | |

All of the fluids that were released into the lined secondary containment system were removed and disposed of via the Vaneta injection well. During the initial spill all but 2 bbls of produced water was removed. After the repairs were made, the rest of the produced water that was comingled with snow was removed and disposed of down the injection well. A total of 25 barrels of produced were spilled and a total of 25 barrels were recovered and injected down the Vaneta SWD. The spill happend in the area of Lat: 40.54047 Long:-106.39140

CORRECTIVE ACTIONS

| | | |
|--|---------------------------|------------|
| #1 | Supplemental Report Date: | 12/13/2016 |
| Cause of Spill (Check all that apply) <input type="checkbox"/> Human Error <input checked="" type="checkbox"/> Equipment Failure <input type="checkbox"/> Historical-Unknown | | |
| <input type="checkbox"/> Other (specify) _____ | | |
| Describe Incident & Root Cause (include specific equipment and point of failure) | | |
| A pressure relief line froze and cracked due to extreme cold, causing production water to spill into lined containment. | | |
| Describe measures taken to prevent the problem(s) from reoccurring: | | |
| Replace the broken line, Install heat trace and insulate piping. | | |
| Volume of Soil Excavated (cubic yards): 0 | | |
| Disposition of Excavated Soil (attach documentation) <input type="checkbox"/> Offsite Disposal <input type="checkbox"/> Onsite Treatment | | |
| <input type="checkbox"/> Other (specify) _____ | | |
| Volume of Impacted Ground Water Removed (bbls): 0 | | |
| Volume of Impacted Surface Water Removed (bbls): 0 | | |

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLD SPRING CREEK OFFICE DENVER
2017 APR 10 AM 10:42

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)
☐ Work proceeding under an approved Form 27
Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 12/13/2016 Email: charwell@sandridgeenergy.com

| COA Type | Description |
|----------|--|
| | Based on the information presented, it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be impacted, then further investigation and/or remediation activities may be required. |
| | This Supplemental Report address COA's from initial report. |

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------|
| 401166350 | FORM 19 SUBMITTED |
| 401166361 | TOPOGRAPHIC MAP |
| 401166362 | SITE MAP |

Total Attach: 3 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone (303) 894-2100 Fax (303) 894-2109



Document Number:

401161178

Date Received:

12/07/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

448600

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (580) 430-4605 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401161178

| | | |
|---|--|------------------------------------|
| Initial Report Date: 12/06/2016 | Date of Discovery: 12/05/2016 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540160 Longitude: -106.391286 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: TANK BATTERY | <input type="checkbox"/> Facility/Location ID No <input type="checkbox"/> No Existing Facility or Location ID No. <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) 05-057-06467 | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? Yes | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): 0 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): >=5 and <100 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: 20 F PARTLY CLOUDY | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 11:42

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A 3/8 inch stainless steel line connecting filter pot to differential pressure meter broke free due to vibration. Fluid came from injection tank through charge pump to filter pot and then out the exposed piece of pipe. The spill did not leave the lined secondary containment. A vacuum truck was used to remove the produced water that was in the lined containment. Rebuilt stainless steel line, connected and tied it down to filter pot to reduce vibration. Switched over to secondary filter pot which has a more direct line to PD pump so less vibration. COGCC Facility Number 324752

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------------|-------------------------|--------------|--|
| 12/5/2016 | COGCC | Mr. Kris Nidel | 970-871-1963 | Was notified of the spill via phone call and email |
| 12/6/2016 | Land Owner | Jack and Vaneta Haworth | 970-723-4614 | Was notified by Mr. Doud SandRidge |
| 12/6/2016 | Jackson County Admin | Mr. Kent Crowder | 970-723-4660 | Was notified by Mr. Doud SandRidge |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 12/07/2016 Email: charwell@sandridgeenergy.com

COA Type Description

| | |
|--|---|
| | Lat/Long provided appears to be for the wellhead. Lat/Long on spill reports should be for the spill discharge point. Please provide location of spill discharge point on Supplemental Report. |
| | Supplemental report should describe the discrepancy between; spill fluid volume and recovered volume. It was reported that spill was inside lined containment. |

Attachment Check List

Att Doc Num Name

| | |
|-----------|-------------------|
| 401161178 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 1 Files

General Comments

User Group Comment Comment Date

| | | |
|---------------|--|------------|
| Environmental | Spill was reported within 24 hours via email to COGCC. | 12/07/2016 |
|---------------|--|------------|

Total: 1 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401166282

Date Received:

12/13/2016

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

448600

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC Operator No: 10598

Address: 123 ROBERT S KERR AVE

City: OKLAHOMA CITY State: OK Zip: 73102

Contact Person: Clay Harwell

Phone Numbers

Phone: (580) 430-4605

Mobile: (405) 590-7483

Email: charwell@sandridgeenergy.com

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401161178

Initial Report Date: 12/06/2016 Date of Discovery: 12/05/2016 Spill Type: Recent Spill

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6

Latitude: 40.540160 Longitude: -106.391286

Municipality (if within municipal boundaries): County: JACKSON

Reference Location:

Facility Type: TANK BATTERY

☐ Facility/Location ID No☐ No Existing Facility or Location ID No.☒ Well API No. (Only if the reference facility is well) 05-057-06467

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0

Estimated Condensate Spill Volume(bbl): 0

Estimated Flow Back Fluid Spill Volume(bbl): 0

Estimated Produced Water Spill Volume(bbl): >=5 and <100

Estimated Other E&P Waste Spill Volume(bbl): 0

Estimated Drilling Fluid Spill Volume(bbl): 0

Specify:

Land Use:

Current Land Use: NON-CROP LAND

Other(Specify):

Weather Condition: 20 F PARTLY CLOUDY

Surface Owner: FEE

Other(Specify):

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

U.S. DEPT OF INTERIOR
 BUREAU OF LAND RIGHT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:42

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A 3/8 inch stainless steel line connecting filter pot to differential pressure meter broke free due to vibration. Fluid came from injection tank through charge pump to filter pot and then out the exposed piece of pipe. The spill did not leave the lined secondary containment. A vacuum truck was used to remove the produced water that was in the lined containment. Rebuilt stainless steel line, connected and tied it down to filter pot to reduce vibration. Switched over to secondary filter pot which has a more direct line to PD pump so less vibration. COGCC Facility Number 324752

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------------|-------------------------|--------------|--|
| 12/5/2016 | COGCC | Mr. Kris Nidel | 970-871-1963 | Was notified of the spill via phone call and email |
| 12/6/2016 | Land Owner | Jack and Vaneta Haworth | 970-723-4614 | Was notified by Mr. Doud SandRidge |
| 12/6/2016 | Jackson County Admin | Mr. Kent Crowder | 970-723-4660 | Was notified by Mr. Doud SandRidge |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|-----------------|--------------------------------------|------------------------|--------------------------|
| #1 | Supplemental Report Date: 12/13/2016 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 70 | 70 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify: _____

Was spill/release completely contained within berms or secondary containment? YES Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☐ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): _____ Width of Impact (feet): _____

Depth of Impact (feet BGS): _____ Depth of Impact (inches BGS): _____

How was extent determined?

Due to the fact that the spill was confined within a lined secondary containment system, the extent of the spill was limited to the containment system.

Soil/Geology Description:

Due to the fact that the spill was confine within a lined secondary containment system, underlying soil was not impacted.

Depth to Groundwater (feet BGS) 17 Number Water Wells within 1/2 mile radius: 2

| | | | | | | |
|--|------------|-------------|--|-------------------|------------|--|
| If less than 1 mile, distance in feet to nearest | Water Well | <u>500</u> | None <input type="checkbox"/> | Surface Water | <u>513</u> | None <input type="checkbox"/> |
| | Wetlands | | None <input checked="" type="checkbox"/> | Springs | | None <input checked="" type="checkbox"/> |
| | Livestock | <u>1000</u> | None <input type="checkbox"/> | Occupied Building | <u>500</u> | None <input type="checkbox"/> |

Additional Spill Details Not Provided Above:

All of the fluids that were released into the lined secondary containment system were removed and disposed of via the Vaneta injection well. During the initial spill all but 2 bbls of produced water was removed. After the repairs were made the rest of the produced water that was comingled with snow was removed and disposed of down the injection well. A total of 70 barrels of produced were spilled and a total of 70 barrels were recovered. The location of the spill was Lat: 40.54047 Long: -106.39140

CORRECTIVE ACTIONS

| | | |
|--|---------------------------|------------|
| #1 | Supplemental Report Date: | 12/13/2016 |
| Cause of Spill (Check all that apply) <input type="checkbox"/> Human Error <input checked="" type="checkbox"/> Equipment Failure <input type="checkbox"/> Historical-Unknown | | |
| <input type="checkbox"/> Other (specify) _____ | | |
| Describe Incident & Root Cause (include specific equipment and point of failure) | | |
| A 3/8 inch stainless steel line connecting filter pot to differential pressure meter broke free due to vibration. Fluid came from injection tank through charge pump to filter pot and then out the exposed piece of pipe. | | |
| Describe measures taken to prevent the problem(s) from reoccurring: | | |
| Rebuilt the stainless steel line connected to the filter pot and tied it down to filter pot to reduce vibration. Switched over to secondary filter pot which has a more direct line to PD pump so less vibration. | | |
| Volume of Soil Excavated (cubic yards): 0 | | |
| Disposition of Excavated Soil (attach documentation) <input type="checkbox"/> Offsite Disposal <input type="checkbox"/> Onsite Treatment | | |
| <input type="checkbox"/> Other (specify) _____ | | |
| Volume of Impacted Ground Water Removed (bbls): 0 | | |
| Volume of Impacted Surface Water Removed (bbls): 0 | | |

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
2017 APR 10 AM 10:42
COLORADO OFFICE

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)
☐ Work proceeding under an approved Form 27
Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 12/13/2016 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | Based on the information presented, it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be impacted, then further investigation and/or remediation activities may be required. |
| | This Supplemental Report address COA's from initial report. |

Attachment Check List

Att Doc Num**Name**

| | |
|-----------|-------------------|
| 401166282 | FORM 19 SUBMITTED |
| 401166346 | TOPOGRAPHIC MAP |
| 401166347 | SITE MAP |

Total Attach: 3 Files

General Comments**User Group****Comment****Comment Date**

| | | |
|--|--|------------------------|
| | | Stamp Upon Approval |
|--|--|------------------------|

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401179619

Date Received:

01/06/2017

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

448929

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|----------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7483 |
| City: OKLAHOMA CITY | State: OK Zip: 73102 | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401179619

| | | |
|--|--|--------------------------|
| Initial Report Date: 01/06/2017 | Date of Discovery: 01/06/2017 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 7 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.598306 Longitude: -106.415469 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No <input type="checkbox"/> No Existing Facility or Location ID No. <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) 05-057-06499 | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? No | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >=1 and <5 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: Sunny 10 degree F7 Winf 7 mph | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> Residence/Occupied Structure <input type="checkbox"/> Livestock <input type="checkbox"/> Public Byway <input type="checkbox"/> Surface Water Supply Area <input type="checkbox"/> As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE CENTER
 2017 APR 10 AM 10:13

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

The pressure gauge on the tubing flow line burst from the minus 40 temps. We are utilizing a hot air trailer to melt snow and vacuum truck to suck up spilled fluid. 4 BBL of oil spilled and 4 BBL of oil was recovered along with melted snow. Isolated all the valves to gauges on wellheads and replaced the pressure gauge.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|------|--------------|-------------|--------------|---|
| | COGCC | Kris Neidel | 970-871-1963 | Mr. Neidel was notified via email about the spill |

OPERATOR COMMENTS:

| |
|--|
| |
|--|

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell

Title: Remediation Supervisor Date: 01/06/2017 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|--|
| | Did the spill impact any other wellheads on the location? Please address in the supplemental report. |
|--|--|

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401179619 | FORM 19 SUBMITTED |
| 401179649 | OTHER |
| 401179650 | OTHER |
| 401179651 | OTHER |

Total Attach: 4 Files

General Comments

User Group

Comment

Comment Date

| | | |
|---------------|---|------------|
| Environmental | It appears that the spill stayed on location, please confirm (or provide information of spill path) in supplemental report. | 01/13/2017 |
| Environmental | It appears that the spill stayed on location, please confirm (or provide information of spill path) in supplemental report. | 01/13/2017 |

Total: 2 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401187861

Date Received:

01/18/2017

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

448929

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (580) 430-4605 |
| City: OKLAHOMA CITY State: OK Zip: 73102 | | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401179619

| | | |
|---|---|------------------------------------|
| Initial Report Date: 01/06/2017 | Date of Discovery: 01/06/2017 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 7 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.598306 Longitude: -106.415469 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL | <input type="checkbox"/> Facility/Location ID No | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) | 05-057-06499 |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? No | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >=1 and <5 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: Sunny 10 degree F7 Winf 7 mph | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if Impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:4

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

The pressure gauge on the tubing flow line burst from the minus 40 temps. We are utilizing a hot air trailer to melt snow and vacuum truck to suck up spilled fluid. 4 BBL of oil spilled and 4 BBL of oil was recovered along with melted snow. Isolated all the valves to gauges on wellheads and replaced the pressure gauge.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|------|--------------|-------------|--------------|---|
| | COGCC | Kris Neidel | 970-871-1963 | Mr. Neidel was notified via email about the spill |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|-----------------|--------------------------------------|------------------------|--------------------------|
| #1 | Supplemental Report Date: 01/18/2017 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 4 | 4 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 0 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |

specify: _____

Was spill/release completely contained within berms or secondary containment? YES Was an Emergency Pit constructed? NO

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☐ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): _____ Width of Impact (feet): _____

Depth of Impact (feet BGS): _____ Depth of Impact (inches BGS): _____

How was extent determined?

Visually, the spill was confined around the wellhead and did not impact any other wellheads on the location.

Soil/Geology Description:

Gravels and Alluviums (Pinedale and Bull Lake Age)

Depth to Groundwater (feet BGS) 2 Number Water Wells within 1/2 mile radius: 2

If less than 1 mile, distance in feet to nearest

| | | | | | |
|------------|------------|--|-------------------|-------------|--|
| Water Well | <u>617</u> | None <input type="checkbox"/> | Surface Water | <u>1771</u> | None <input type="checkbox"/> |
| Wetlands | | None <input checked="" type="checkbox"/> | Springs | | None <input checked="" type="checkbox"/> |
| Livestock | <u>500</u> | None <input type="checkbox"/> | Occupied Building | | None <input checked="" type="checkbox"/> |

Additional Spill Details Not Provided Above:

The spill was confined around the wellhead and did not leave the well pad.

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 01/18/2017

Cause of Spill (Check all that apply) ☐ Human Error ☒ Equipment Failure ☐ Historical-Unknown
☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

The pressure gauge on the tubing flow line burst from the minus 40 temps. We are utilizing a hot air trailer to melt snow and vacuum truck to suck up spilled fluid. 4 BBL of oil spilled and 4 BBL of oil was recovered along with melted snow.

Describe measures taken to prevent the problem(s) from reoccurring:

Isolated all the valves to gauges on wellheads and replaced the pressure gauge.

Volume of Soil Excavated (cubic yards): 0

Disposition of Excavated Soil (attach documentation) ☐ Offsite Disposal ☐ Onsite Treatment
☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): 0

Volume of Impacted Surface Water Removed (bbls): 0

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)
☐ Work proceeding under an approved Form 27
Form 27 Remediation Project No: _____

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
2017 APR 10 AM 10:43

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Clay Harwell
Title: Remediation Supervisor Date: 01/18/2017 Email: charwell@sandridgeenergy.com

COA Type

Description

| | |
|--|---|
| | , it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be impacted, then further investigation and/or remediation activities may be required. In addition, the surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. |
| | At the time of reclamation, samples analyzed shall be collected to determine that there is no exceedance of Table 910-1 constituents. |

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------|
| 401187861 | FORM 19 SUBMITTED |
| 401188197 | SITE MAP |
| 401188204 | TOPOGRAPHIC MAP |
| 401188233 | OTHER |

Total Attach: 4 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

FORM

19

Rev 8/13

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
 Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401185628

Date Received:

01/16/2017

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

448972

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 440-6100</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Mobile: <u>()</u> |
| | | Email: <u>BDodek@Bonanzackr.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401185628

Initial Report Date: 01/16/2017 Date of Discovery: 01/16/2017 Spill Type: Recent Spill

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NWSE SEC 2 TWP 9N RNG 79W MERIDIAN 6

Latitude: 40.779823 Longitude: -106.233836

Municipality (if within municipal boundaries): _____ County: JACKSON

Reference Location:

Facility Type: FLOWLINE☐ Facility/Location ID No _____☒ No Existing Facility or Location ID No.☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0Estimated Condensate Spill Volume(bbl): 0Estimated Flow Back Fluid Spill Volume(bbl): 0Estimated Produced Water Spill Volume(bbl): >=5 and <100Estimated Other E&P Waste Spill Volume(bbl): 0Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: _____

Land Use:

Current Land Use: NON-CROP LAND

Other(Specify): _____

Weather Condition: 26°F, cloudy, snow coveredSurface Owner: FEDERAL

Other(Specify): _____

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MGMT
 COLORADO STATE OFFICE
 DENVER
 2017 APR 10 AM 11:43

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A water injection line failed and released produced water to the ground, outside of containment. With current snow cover at the site, the current estimated release volume is 50 bbls. The release occurred 60 feet west of the Pierre B tank battery. The line and associated injection wells were immediately shut in to stop the release. A vac truck will be called out to recover any pooled fluid. Environmental personnel will assess the impact to the surface. Remediation details will be submitted in a subsequent Form 19. The line will either be replaced or repaired and pressure tested prior to being put back into service.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------------------------|
| 1/16/2017 | Jackson County | Kent Crowder | -on file | Notified of release |
| 1/16/2017 | COGCC | Kris Neidel | -on file | Notified of release via eForm 19 |
| 1/16/2017 | BLM | | -on file | Notified of release via WIS submittal |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Env Supervisor Date: 01/16/2017 Email: BDodek@Bonanzacrk.com

COA Type

Description

| | |
|--|--|
| | Operator should provide demonstration with flowline rule, 1101.e.upon request for closure. |
| | Supplemental Report should include a map showing the impacted area. |
| | Due to the nature of the shallow groundwater in the vicinity of the Spill/Release point, Monitoring Wells (MW-11. MW-12. MW-3 and MW-14) previously installed shall be monitored and sampled for Table 910-1 Constituents within 30-days of this incident. |

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------|
| 401185628 | FORM 19 SUBMITTED |
| 401185760 | TOPOGRAPHIC MAP |

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|---------------------|
| | | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401227696

Date Received:

03/08/2017

Spill report taken by

NEIDEL KRIS

Spill/Release Point ID:

448972

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 4406100</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Mobile: <u>()</u> |
| | | Email: <u>Bdodek@Bonanzacrk.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401185628

| | | |
|---|---|------------------------------------|
| Initial Report Date: <u>01/16/2017</u> | Date of Discovery: <u>01/16/2017</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR NWSE SEC 2 TWP 9N RNG 79W MERIDIAN 6</u> | | |
| Latitude: <u>40.779823</u> | Longitude: <u>-106.233836</u> | |
| Municipality (if within municipal boundaries): _____ | County: <u>JACKSON</u> | |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input type="checkbox"/> Facility/Location ID No _____ | |
| | <input checked="" type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05- -</u> | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? <u>Yes</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=5 and <100</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>26°F, cloudy, snow covered</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

U.S. DEPT. OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO OFFICE
 2017 APR 10 AM 10:43

Describe what is known about the spill/release event (what happened – including how it was stopped, contained, and recovered):

A water injection line failed and released produced water to the ground, outside of containment. With current snow cover at the site, the current estimated release volume is 50 bbls. The release occurred 60 feet west of the Pierre B tank battery. The line and associated injection wells were immediately shut in to stop the release. A vac truck will be called out to recover any pooled fluid. Environmental personnel will assess the impact to the surface. Remediation details will be submitted in a subsequent Form 19. The line will either be replaced or repaired and pressure tested prior to being put back into service.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------------------------|
| 1/16/2017 | Jackson County | Kent Crowder | -on file | Notified of release |
| 1/16/2017 | COGCC | Kris Neidel | -on file | Notified of release via eForm 19 |
| 1/16/2017 | BLM | | -on file | Notified of release via WIS submittal |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--------------------------------------|--|--|
| #1 | Supplemental Report Date: 01/26/2017 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 50 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): <u>75</u> | | Width of Impact (feet): <u>55</u> | |
| Depth of Impact (feet BGS): <u>8</u> | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| The extent was determined via visual delineation digging into the snow cover, field screening, and laboratory analysis. | | | |
| Soil/Geology Description: | | | |
| Bosler Sandy Loam | | | |
| Depth to Groundwater (feet BGS) <u>15</u> | | Number Water Wells within 1/2 mile radius: <u>0</u> | |
| If less than 1 mile, distance in feet to nearest | | Water Well <u>2816</u> None <input type="checkbox"/> | Surface Water _____ None <input checked="" type="checkbox"/> |
| | | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building <u>382</u> None <input type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | |

Following the release, the soil above the flowline was excavated to expose and repair the flowline. The injection line was successfully repaired and pressure tested. Soil samples were collected to confirm the soil was compliant with COGCC Table 910-1 standards. The stockpile of excavated soil was compliant with COGCC Table 910-1 standards and was used to backfill the flowline excavation. The samples collected from the excavation were also compliant with COGCC Table 910-1 standards. Surface Soil Samples SS06 and SS07 slightly exceeded standards for benzene/SAR and SAR, respectively. Due to the compliant levels of EC and pH on the surface, BCEOC plans to monitor vegetation growth to determine if the elevated SAR will affect revegetation. Surface Soil Sample SS06 will be resampled to confirm compliance with the COGCC Table 910-1 benzene standard. Even if a compliant soil sample is collected at SS06, BCEOC will not request closure until spring when snow cover is gone and the full release footprint can be checked visually. BCEOC has scheduled sampling of the four nearby monitoring wells as requested. Weather has been and continues to be unfavorable at the site. Heavy snow cover still persists since the release. BCEOC will attempt to sample the monitoring wells on 3/9/17. Results will be submitted in a subsequent Form 19.

CORRECTIVE ACTIONS

| | | |
|---|---|---|
| #1 | Supplemental Report Date: | 01/26/2017 |
| Cause of Spill (Check all that apply) | | |
| <input type="checkbox"/> Human Error | <input checked="" type="checkbox"/> Equipment Failure | <input type="checkbox"/> Historical-Unknown |
| <input type="checkbox"/> Other (specify) _____ | | |
| Describe Incident & Root Cause (include specific equipment and point of failure) | | |
| An injection line failed due to internal corrosion. | | |
| Describe measures taken to prevent the problem(s) from reoccurring: | | |
| The flowline was repaired, successfully pressure tested, and returned to service. BCEOC continues to analyze water and corrosion inhibitor treatment volumes in the field to reduce corrosion failures. | | |
| Volume of Soil Excavated (cubic yards): 66 | | |
| Disposition of Excavated Soil (attach documentation) | | |
| <input type="checkbox"/> Offsite Disposal | <input type="checkbox"/> Onsite Treatment | |
| <input checked="" type="checkbox"/> Other (specify) Used to backfill the excavation | | |
| Volume of Impacted Ground Water Removed (bbls): 0 | | |
| Volume of Impacted Surface Water Removed (bbls): 0 | | |

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COLORADO STATE OFFICE
2017 APR 10 AM 10:43

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure:

☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

Within the 1/2 mile radius there are 17 ground water monitoring wells.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek

Title: Environmental Supervisor Date: 03/08/2017 Email: Bdodek@Bonanzacrk.com

COA Type

Description

Please provide and explanation for 50bbls spilled and 0 recovered.

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|------------------------------------|
| 401227696 | SPILL/RELEASE REPORT(SUPPLEMENTAL) |
| 401228456 | ANALYTICAL RESULTS |
| 401230942 | FORM 19 SUBMITTED |

Total Attach: 3 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|---------------------|
| Agency | Units of sample depth are reported in feet, it is believed that the depth unit is reported in inches. | 03/10/2017 |

Total: 1 comment(s)

FORM

19

Rev 8/13

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401242620

Date Received:

03/24/2017

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

448972

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|------------------------------------|--|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers Phone: <u>(720) 225-6653</u> Mobile: <u>()</u> Email: <u>bdodek@bonanzacrk.c</u> <u>om</u> |
| Address: <u>410 17TH STREET SUITE #1400</u> | | |
| City: <u>DENVER</u> | State: <u>CO</u> Zip: <u>80202</u> | |
| Contact Person: <u>Brian Dodek</u> | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401185628

| | | |
|--|--|---------------------------------|
| Initial Report Date: <u>01/16/2017</u> | Date of Discovery: <u>01/16/2017</u> | Spill Type: <u>Recent Spill</u> |
| Spill/Release Point Location: | | |
| Location of Spill/Release: <u>QTRQTR NWSE SEC 2 TWP 9N RNG 79W MERIDIAN 6</u> | | |
| Latitude: <u>40.779823</u> Longitude: <u>-106.233836</u> | | |
| Municipality (if within municipal boundaries): _____ | County: <u>JACKSON</u> | |
| Reference Location: | | |
| Facility Type: <u>FLOWLINE</u> | <input type="checkbox"/> Facility/Location ID No _____ <input checked="" type="checkbox"/> No Existing Facility or Location ID No. <input type="checkbox"/> Well API No. (Only if the reference facility is well) <u>05-</u> _____ | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? <u>Yes</u> | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? <u>Yes</u> | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): <u>0</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> | |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=5 and <100</u> | |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: <u>NON-CROP LAND</u> | Other(Specify): _____ | |
| Weather Condition: <u>26°F, cloudy, snow covered</u> | | |
| Surface Owner: <u>FEDERAL</u> | Other(Specify): _____ | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> Residence/Occupied Structure <input type="checkbox"/> Livestock <input type="checkbox"/> Public Byway <input type="checkbox"/> Surface Water Supply Area <input type="checkbox"/> As defined in COGCC 100-Series Rules | | |

U.S. DEPT OF INTERIOR
 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:4

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A water injection line failed and released produced water to the ground, outside of containment. With current snow cover at the site, the current estimated release volume is 50 bbls. The release occurred 60 feet west of the Pierre B tank battery. The line and associated injection wells were immediately shut in to stop the release. A vac truck will be called out to recover any pooled fluid. Environmental personnel will assess the impact to the surface. Remediation details will be submitted in a subsequent Form 19. The line will either be replaced or repaired and pressure tested prior to being put back into service.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|----------|---------------------------------------|
| 1/16/2017 | Jackson County | Kent Crowder | -on file | Notified of release |
| 1/16/2017 | COGCC | Kris Neidel | -on file | Notified of release via eForm 19 |
| 1/16/2017 | BLM | | -on file | Notified of release via WIS submittal |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--|--|--------------------------|
| #1 | Supplemental Report Date: 03/24/2017 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 50 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): <u>75</u> | | Width of Impact (feet): <u>55</u> | |
| Depth of Impact (feet BGS): <u>8</u> | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| The extent was determined via visual delineation digging into the snow cover, field screening, and laboratory analysis. | | | |
| Soil/Geology Description: | | | |
| Bosler Sandy Loam | | | |
| Depth to Groundwater (feet BGS) <u>15</u> | | Number Water Wells within 1/2 mile radius: <u>0</u> | |
| If less than 1 mile, distance in feet to nearest | Water Well <u>2816</u> None <input type="checkbox"/> | Surface Water _____ None <input checked="" type="checkbox"/> | |
| | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> | |
| | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building <u>382</u> None <input type="checkbox"/> | |
| Additional Spill Details Not Provided Above: | | | |

BCEOC collected a follow-up sample to the previous non-compliant SS06. The new sample (SS06R) is now compliant with the COGCC Table 910-1 benzene standard. As follow-up to the COGCC questions on the previous supplemental Form 19: 1) The release occurred beneath heavy snow cover. The release volume of 50 bbl is a loose estimate based on the estimated spill footprint. Holes were hand dug through the snow to check for the presence of produced water. Though the release samples are compliant with the COGCC Table 910-1 hydrocarbon standards, BCEOC will wait until the snow cover is gone to visually confirm that there are no additional impacts on the ground surface. 2) The previously reported depth units are correct. While the surface impact is only a few inches deep, the flowline release occurred at 8 feet bgs, so that number was reported as total depth.

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek

Title: Env Supervisor Date: 03/24/2017 Email: bdodek@bonanzacrk.com

COA Type

Description

Attachment Check List

Att Doc Num

Name

| | |
|-----------|------------------------------------|
| 401242620 | SPILL/RELEASE REPORT(SUPPLEMENTAL) |
| 401242664 | ANALYTICAL RESULTS |
| 401246308 | FORM 19 SUBMITTED |

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|---------------------|
| | | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:43

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401198611

Date Received:

01/31/2017

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

449099

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906 b, for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|----------------------|-------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 590-7483 |
| City: OKLAHOMA CITY | State: OK Zip: 73102 | Mobile: (405) 590-7483 |
| Contact Person: Clay Harwell | | Email: charwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401198611

Initial Report Date: 01/31/2017 Date of Discovery: 01/30/2017 Spill Type: Historical Release

Spill/Release Point Location:

Location of Spill/Release: QTRQTR NWNE SEC 7 TWP 7N RNG 80W MERIDIAN 6

Latitude: 40.598306 Longitude: -106.415469

Municipality (if within municipal boundaries): County: JACKSON

Reference Location:

Facility Type: WELL PAD

☐ Facility/Location ID No

☐ No Existing Facility or Location ID No.

☒ Well API No. (Only if the reference facility is well) 05-057-06499

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): Unknown

Estimated Condensate Spill Volume(bbl): Unknown

Estimated Flow Back Fluid Spill Volume(bbl): 0

Estimated Produced Water Spill Volume(bbl): Unknown

Estimated Other E&P Waste Spill Volume(bbl): 0

Estimated Drilling Fluid Spill Volume(bbl): 0

Specify:

Land Use:

Current Land Use: NON-CROP LAND

Other(Specify):

Weather Condition: Clear, 0-20 degrees F

Surface Owner: FEE

Other(Specify):

Check If Impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

On, January 19, 2017, historical hydrocarbon impacts were observed during hydrovac activities around the wellhead. The limits of the hydrovac excavation were approximately 6 feet by 3 feet by 1 foot deep. No groundwater was encountered. One soil sample was collected for BTEX and TPH analysis. Laboratory analytical results were received on January 31, 2017. TPH concentrations were 7,600 mg/kg and benzene concentrations were 9.1 mg/kg. These concentrations exceed the COGCC Table 910-1 allowable limits. Delineation of the soil impacts is ongoing.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|--------------|---------------------|
| 1/31/2017 | Jackson County | Kent Drowder | 970-723-4660 | Email - No Response |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Jess Alexander
Title: Project Env. Scientist Date: 01/31/2017 Email: jalexander@ltenv.com

COA Type

Description

| | |
|--|--|
| | Any visible hydrocarbon should be removed upon discovery, per rule 907.a.(1). |
| | From discussion with operator is understood that the spill extent will be determined when weather conditions allow (after snowmelt). |
| | Cellar and local area should be monitored on a regular basis until site conditions allow full remediation. |

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------------------|
| 401198611 | SPILL/RELEASE REPORT(INITIAL) |
| 401198652 | ANALYTICAL RESULTS |
| 401198729 | TOPOGRAPHIC MAP |
| 401201291 | FORM 19 SUBMITTED |

Total Attach: 4 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|---------------------|
| | | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)

U.S. DEPT OF INTERIOR
BUREAU OF LAND MGMT
COLORADO STATE OFFICE DENVER
2017 APR 10 AM 10:43

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401201164

Date Received:

02/02/2017

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

449099

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|----------------------|--|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers Phone: (405) 590-7483 Mobile: (405) 590-7483 Email: charwell@sandridgeenergy.com |
| Address: 123 ROBERT S KERR AVE | | |
| City: OKLAHOMA CITY | State: OK Zip: 73102 | |
| Contact Person: Clay Harwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401198611

| | | |
|--|--|--------------------------------|
| Initial Report Date: 01/31/2017 | Date of Discovery: 01/30/2017 | Spill Type: Historical Release |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NWNE SEC 7 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.598306 Longitude: -106.415469 | | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL PAD | <input type="checkbox"/> Facility/Location ID No <input type="checkbox"/> No Existing Facility or Location ID No. <input checked="" type="checkbox"/> Well API No. (Only if the reference facility is well) 05-057-06499 | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? No | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): Unknown | Estimated Condensate Spill Volume(bbl): Unknown | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): Unknown | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: Clear, 0-20 degrees F | | |
| Surface Owner: FEE | Other(Specify): | |
| Check if Impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> Residence/Occupied Structure <input type="checkbox"/> Livestock <input type="checkbox"/> Public Byway <input type="checkbox"/> Surface Water Supply Area <input type="checkbox"/> | | |
| As defined in COGCC 100-Series Rules | | |

Describe what is known about the spill/release event (what happened – including how it was stopped, contained, and recovered):

On, January 19, 2017, historical hydrocarbon impacts were observed during hydrovac activities around the wellhead. The limits of the hydrovac excavation were approximately 6 feet by 3 feet by 1 foot deep. No groundwater was encountered. One soil sample was collected for BTEX and TPH analysis. Laboratory analytical results were received on January 31, 2017. TPH concentrations were 7,600 mg/kg and benzene concentrations were 9.1 mg/kg. These concentrations exceed the COGCC Table 910-1 allowable limits. Delineation of the soil impacts is ongoing.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|--------------|---------------------|
| 1/31/2017 | Jackson County | Kent Drowder | 970-723-4660 | Email - No Response |

SPILL/RELEASE DETAIL REPORTS

| #1 | Supplemental Report Date: | 02/02/2017 | |
|--|---------------------------|--|---|
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | | | <input checked="" type="checkbox"/> |
| CONDENSATE | | | <input checked="" type="checkbox"/> |
| PRODUCED WATER | | | <input checked="" type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): <u>6</u> | | Width of Impact (feet): <u>3</u> | |
| Depth of Impact (feet BGS): <u>1</u> | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| The extent of impact at the Hebron 02-07H has not yet been determined | | | |
| Soil/Geology Description: | | | |
| Bosler sandy loam | | | |
| Depth to Groundwater (feet BGS) <u>75</u> | | Number Water Wells within 1/2 mile radius: <u>2</u> | |
| If less than 1 mile, distance in feet to nearest | | Water Well <u>622</u> None <input type="checkbox"/> | Surface Water <u>1944</u> None <input type="checkbox"/> |
| | | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building <u>2248</u> None <input type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | |

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COLORADO OFFICE DENVER

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 02/02/2017

Cause of Spill (Check all that apply) ☐ Human Error ☐ Equipment Failure ☒ Historical-Unknown
☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

Historical hydrocarbon impact was observed. The root cause of the release cannot be determined.

Describe measures taken to prevent the problem(s) from reoccurring:

Routine maintenance and monitoring of equipment

Volume of Soil Excavated (cubic yards): 1

Disposition of Excavated Soil (attach documentation) ☒ Offsite Disposal ☐ Onsite Treatment
☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): 0

Volume of Impacted Surface Water Removed (bbls): 0

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

Current weather conditions prohibit remedial activities of this historical release. Deep snow and frozen ground are present at the Site. There is no immediate threat to Waters of the State due to these impacts. SandRidge will continue delineation and remediation of the historical impacts after spring thaw occurs.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Jess Alexander

Title: Project Env. Scientist Date: 02/02/2017 Email: jalexander@ltenv.com

| CQA Type | Description |
|----------|-------------|
| | |

Attachment Check List

| Att Doc Num | Name |
|-------------|------------------------------------|
| 401201164 | SPILL/RELEASE REPORT(SUPPLEMENTAL) |
| 401201174 | ANALYTICAL RESULTS |
| 401201175 | TOPOGRAPHIC MAP |
| 401202221 | FORM 19 SUBMITTED |

Total Attach: 4 Files

General Comments

| User Group | Comment | Comment Date |
|------------|---------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401218264

Date Received:

02/24/2017

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

449338

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906 b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|--------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 429-5562 |
| City: OKLAHOMA CITY | State: OK | Mobile: (405) 203-6971 |
| Zip: 73102 | | Email: dbirdwell@sandridgeenergy.com |
| Contact Person: Dale Birdwell | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401218264

| | | |
|---|--|------------------------------------|
| Initial Report Date: 02/24/2017 | Date of Discovery: 02/22/2017 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540275 | Longitude: -106.390943 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL PAD | <input checked="" type="checkbox"/> Facility/Location ID No 324752 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- - | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? | Yes | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? | No | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >=1 and <5 | Estimated Condensate Spill Volume(bbl): | 0 |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): | 0 |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): | 0 |
| Specify: | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): | |
| Weather Condition: Mid 30's | | |
| Surface Owner: OTHER (SPECIFY) | Other(Specify): | |
| Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

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 2017 APR 10 AM 10:43

Describe what is known about the spill/release event (what happened – including how it was stopped, contained, and recovered):

A hot oil truck was loading oil on the pad at the Veneta 1-32D SWD location. Approximately 28 barrels (bbl) of oil was loaded in to the truck. The vehicle operator shut down the loading operation to have a JSA signed. The vehicle operator and safety tech then noticed oil coming out of the truck. The 3-inch hose on the back of the truck did not have a cap on the end of the hose and 3 bbl of oil ran out in to a snow melt puddle. The vehicle operator forgot to shut a 3-inch valve on the back of the truck. The release occurred approximately 10-feet southeast of the loading area on the pad. The valve was immediately closed and a vacuum truck was called in and removed all of the released oil for offsite disposal. The soils within the release area will be evaluated and confirmation soil sampling will be conducted to verify that any potential petroleum hydrocarbon impacts have been removed.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|-------------------------|--------------|--|
| 2/24/2017 | Jackson County | Kent Crowder | 970-218-4532 | Contacted via phone - No comments |
| 2/23/2017 | COGCC | Kris Neidel | 970-871-1963 | Contacted via email - Responded with no comments |
| 2/24/2017 | Surface Owner | Jack and Vaneta Haworth | 970-723-4616 | Contacted via phone - No comments |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Dale Birdwell
Title: Senior EH&S Specialist Date: 02/24/2017 Email: dbirdwell@sandridgeenergy.com

COA Type

Description

| | |
|--|---|
| | The supplemental report should show the spill path plotted on an aerial map (or equivalent), this will be key in determining if soil samples were taken at appropriate locations. |
|--|---|

Attachment Check List

| Att Doc Num | Name |
|-------------|-------------------------------|
| 401218264 | SPILL/RELEASE REPORT(INITIAL) |
| 401218450 | TOPOGRAPHIC MAP |
| 401219438 | FORM 19 SUBMITTED |

Total Attach: 3 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|--|--------------|
| Environmental | Double checking valves to make sure that they are in the off position should be incorporated into the JSA. | 02/24/2017 |

Total: 1 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401224420

Date Received:

03/03/2017

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

449338

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|--|--------------------|--------------------------------------|
| Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC | Operator No: 10598 | Phone Numbers |
| Address: 123 ROBERT S KERR AVE | | Phone: (405) 429-5562 |
| City: OKLAHOMA CITY | State: OK | Zip: 73102 |
| Contact Person: Dale Birdwell | | Mobile: (405) 203-6971 |
| | | Email: dbirdwell@sandridgeenergy.com |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401218264

| | | |
|---|--|------------------------------------|
| Initial Report Date: 02/24/2017 | Date of Discovery: 02/22/2017 | Spill Type: Recent Spill |
| Spill/Release Point Location: | | |
| Location of Spill/Release: QTRQTR NENE SEC 32 TWP 7N RNG 80W MERIDIAN 6 | | |
| Latitude: 40.540275 | Longitude: -106.390943 | |
| Municipality (if within municipal boundaries): | County: JACKSON | |
| Reference Location: | | |
| Facility Type: WELL PAD | <input checked="" type="checkbox"/> Facility/Location ID No 324752 | |
| | <input type="checkbox"/> No Existing Facility or Location ID No. | |
| | <input type="checkbox"/> Well API No. (Only if the reference facility is well) 05- - | |
| Fluid(s) Spilled/Released (please answer Yes/No): | | |
| Was one (1) barrel or more spilled outside of berms or secondary containment? Yes | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | |
| Were Five (5) barrels or more spilled? No | | |
| Estimated Total Spill Volume: use same ranges as others for values | | |
| Estimated Oil Spill Volume(bbl): >=1 and <5 | Estimated Condensate Spill Volume(bbl): 0 | |
| Estimated Flow Back Fluid Spill Volume(bbl): 0 | Estimated Produced Water Spill Volume(bbl): 0 | |
| Estimated Other E&P Waste Spill Volume(bbl): 0 | Estimated Drilling Fluid Spill Volume(bbl): 0 | |
| Specify: _____ | | |
| Land Use: | | |
| Current Land Use: NON-CROP LAND | Other(Specify): _____ | |
| Weather Condition: Mid 30's | | |
| Surface Owner: OTHER (SPECIFY) | Other(Specify): _____ | |
| Check if Impacted or threatened by spill/Release (please answer Yes/No to all that apply): | | |
| Waters of the State <input type="checkbox"/> | Residence/Occupied Structure <input type="checkbox"/> | Livestock <input type="checkbox"/> |
| Public Byway <input type="checkbox"/> | Surface Water Supply Area <input type="checkbox"/> | |
| As defined in COGCC 100-Series Rules | | |

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 BUREAU OF LAND MANAGEMENT
 COLORADO STATE OFFICE DENVER
 2017 APR 10 AM 10:43

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

A hot oil truck was loading oil on the pad at the Veneta 1-32D SWD location. Approximately 28 barrels (bbl) of oil was loaded in to the truck. The vehicle operator shut down the loading operation to have a JSA signed. The vehicle operator and safety tech then noticed oil coming out of the truck. The 3-inch hose on the back of the truck did not have a cap on the end of the hose and 3 bbl of oil ran out in to a snow melt puddle. The vehicle operator forgot to shut a 3-inch valve on the back of the truck. The release occurred approximately 10-feet southeast of the loading area on the pad. The valve was immediately closed and a vacuum truck was called in and removed all of the released oil for offsite disposal. The soils within the release area will be evaluated and confirmation soil sampling will be conducted to verify that any potential petroleum hydrocarbon impacts have been removed.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|-------------------------|--------------|--|
| 2/24/2017 | Jackson County | Kent Crowder | 970-218-4532 | Contacted via phone - No comments |
| 2/23/2017 | COGCC | Kris Neidel | 970-871-1963 | Contacted via email - Responded with no comments |
| 2/24/2017 | Surface Owner | Jack and Vaneta Haworth | 970-723-4616 | Contacted via phone - No comments |

SPILL/RELEASE DETAIL REPORTS

| | | | | |
|---|---------------------------|--|--|--|
| #1 | Supplemental Report Date: | 03/03/2017 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown | |
| OIL | 3 | 3 | <input type="checkbox"/> | |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> | |
| PRODUCED WATER | 0 | 0 | <input type="checkbox"/> | |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> | |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> | |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> | |
| specify: _____ | | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | | |
| Surface Area Impacted: | | Length of Impact (feet): <u>20</u> | Width of Impact (feet): <u>30</u> | |
| | | Depth of Impact (feet BGS): _____ | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | | |
| Excavation activities will be conducted to remove any remaining contamination. Confirmation soil samples will be collected from the release area following excavation activities for laboratory analysis of BTEX and TPH (GRO/DRO). The analytical results of the soil samples will be compared to the applicable COGCC Table 910-1 Concentration Levels to verify the efficacy of cleanup efforts. | | | | |
| Soil/Geology Description: | | | | |
| Road base overlaying clay. | | | | |
| Depth to Groundwater (feet BGS) <u>20</u> | | Number Water Wells within 1/2 mile radius: <u>2</u> | | |
| If less than 1 mile, distance in feet to nearest | | Water Well <u>460</u> None <input type="checkbox"/> | Surface Water <u>580</u> None <input type="checkbox"/> | |
| | | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> | |
| | | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building _____ None <input checked="" type="checkbox"/> | |
| Additional Spill Details Not Provided Above: | | | | |

Depth to groundwater is estimated at 20 feet bgs based on static water level in water well (DWR receipt #: 3672962) located 480 feet south-southwest of spill location.

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 03/03/2017

Cause of Spill (Check all that apply) ☒ Human Error ☐ Equipment Failure ☐ Historical-Unknown
☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

A hot oil truck was loading oil on the pad at the Veneta 1-32D SWD location. The hot oil truck operator shut down the loading operation to have a JSA signed. The hot oil truck operator and safety tech then noticed oil coming out of the truck. The vehicle operator had failed to attach the cap to a 3-inch hose on the back of the truck and 3 bbl of oil ran out in to a snow melt puddle. The cause of the incident was operator error by the hot oil truck operator who did not follow loading protocols.

Describe measures taken to prevent the problem(s) from reoccurring:

The hot oil truck operator was sent home and the incident was reported to the hot oil trucking company's management.

Volume of Soil Excavated (cubic yards): _____

Disposition of Excavated Soil (attach documentation) ☐ Offsite Disposal ☐ Onsite Treatment
☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): _____

Volume of Impacted Surface Water Removed (bbls): _____

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COLORADO STATE OFFICE DENVER

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)
☐ Work proceeding under an approved Form 27
Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Dale Birdwell
Title: Senior EH&S Specialist Date: 03/03/2017 Email: dbirdwell@sandridgeenergy.com

COA Type Description

Attachment Check List

| Att Doc Num | Name |
|-------------|------------------------------------|
| 401224420 | SPILL/RELEASE REPORT(SUPPLEMENTAL) |
| 401224487 | TOPOGRAPHIC MAP |
| 401230902 | FORM 19 SUBMITTED |

Total Attach: 3 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|---------------------|
| Agency | Please submit supplemental report including a map showing flow path of fluid. | 03/10/2017 |

Total: 1 comment(s)

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401237190

Date Received:

03/20/2017

Spill report taken by:

NEIDEL KRIS

Spill/Release Point ID:

449745

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 4406100</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Email: <u>Bdodek@Bonanzacrk.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401237190

Initial Report Date: 03/20/2017 Date of Discovery: 03/20/2017 Spill Type: Recent Spill

Spill/Release Point Location:

Location of Spill/Release: QTRQTR SWSE SEC 2 TWP 9N RNG 79W MERIDIAN 6Latitude: 40.775832 Longitude: -106.229146Municipality (if within municipal boundaries): _____ County: JACKSON

Reference Location:

Facility Type: FLOWLINE☐ Facility/Location ID No _____☐ No Existing Facility or Location ID No.☒ Well API No. (Only if the reference facility is well) 05-057-06052

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): >=1 and <5Estimated Condensate Spill Volume(bbl): 0Estimated Flow Back Fluid Spill Volume(bbl): 0Estimated Produced Water Spill Volume(bbl): >=1 and <5Estimated Other E&P Waste Spill Volume(bbl): 0Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: _____

Land Use:

Current Land Use: NON-CROP LAND

Other(Specify): _____

Weather Condition: 50°, Partly CloudySurface Owner: FEDERAL

Other(Specify): _____

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

U.S. DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE DENVER

2017 APR 10 AM 10:43

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During routine inspections, a flowline failed and released approximately 2 bbls of produced water and 2 bbls of oil to the ground, outside of containment. The release occurred 900 feet north of the McCallum Unit 74 wellhead and 30 feet south of a flowline manifold building. The well and flowline was immediately shut in to stop the release. Bonanza Creek environmental personnel will assess the impact to the surface and remediation details will be submitted in a subsequent Form 19. The flowline will either be replaced or repaired and pressure tested prior to being put back into service.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|-----------|---------------------------------------|
| 3/20/2017 | Jackson County | Kent Crowder | --on file | notified of release |
| 3/20/2017 | COGCC | Kris Neidel | --on file | notified of release via eForm 19 |
| 3/20/2017 | BLM | | --on file | Notified of release via WIS submittal |

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek
Title: Environmental Supervisor Date: 03/20/2017 Email: Bdodek@Bonanzacrk.com

COA Type

Description

| | |
|--|---|
| | Demonstration that soil concentrations are below COGCC table 910-1 should be provided prior to "request for closure". |
| | Operator should provide demonstration with flowline rule, 1101.e. upon request for closure. |

Attachment Check List

Att Doc Num

Name

| | |
|-----------|-------------------------------|
| 401237190 | SPILL/RELEASE REPORT(INITIAL) |
| 401238339 | TOPOGRAPHIC MAP |
| 401239703 | FORM 19 SUBMITTED |

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|---------------------|
| | | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401241313

Date Received:

03/24/2017

Spill report taken by:

NEIDEL, KRIS

Spill/Release Point ID:

449745

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

| | | |
|---|--------------------------|-------------------------------------|
| Name of Operator: <u>BONANZA CREEK ENERGY OPERATING COMPANY LLC</u> | Operator No: <u>8960</u> | Phone Numbers |
| Address: <u>410 17TH STREET SUITE #1400</u> | | Phone: <u>(720) 4406100</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Brian Dodek</u> | | Email: <u>Bdodek@bonanzacrk.com</u> |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401237190

| | | |
|--|--------------------------------------|---------------------------------|
| Initial Report Date: <u>03/20/2017</u> | Date of Discovery: <u>03/20/2017</u> | Spill Type: <u>Recent Spill</u> |
|--|--------------------------------------|---------------------------------|

Spill/Release Point Location:

Location of Spill/Release: QTRQTR SWSE SEC 2 TWP 9N RNG 79W MERIDIAN 6

Latitude: 40.775832 Longitude: -106.229146

Municipality (if within municipal boundaries): _____ County: JACKSON

Reference Location:

Facility Type: FLOWLINE ☐ Facility/Location ID No. _____

☐ No Existing Facility or Location ID No.

☒ Well API No. (Only if the reference facility is well) 05-057-06052

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

| | |
|--|---|
| Estimated Oil Spill Volume(bbl): <u>>=1 and <5</u> | Estimated Condensate Spill Volume(bbl): <u>0</u> |
| Estimated Flow Back Fluid Spill Volume(bbl): <u>0</u> | Estimated Produced Water Spill Volume(bbl): <u>>=1 and <5</u> |
| Estimated Other E&P Waste Spill Volume(bbl): <u>0</u> | Estimated Drilling Fluid Spill Volume(bbl): <u>0</u> |

Specify: _____

Land Use:

Current Land Use: NON-CROP LAND Other(Specify): _____

Weather Condition: 50°, Partly Cloudy

Surface Owner: FEDERAL Other(Specify): _____

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

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Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During routine inspections, a flowline failed and released approximately 2 bbls of produced water and 2 bbls of oil to the ground, outside of containment. The released occurred 900 feet north of the McCallum Unit 74 wellhead and 30 feet south of a flowline manifold building. The well and flowline was immediately shut in to stop the release. Bonanza Creek environmental personnel will assess the impact to the surface and remediation details will be submitted in a subsequent Form 19. The flowline will either be replaced or repaired and pressure tested prior to being put back into service.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

| Date | Agency/Party | Contact | Phone | Response |
|-----------|----------------|--------------|-----------|---------------------------------------|
| 3/20/2017 | Jackson County | Kent Crowder | --on file | notified of release |
| 3/20/2017 | COGCC | Kris Neidel | --on file | notified of release via eForm 19 |
| 3/20/2017 | BLM | | --on file | Notified of release via WIS submittal |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|--|--------------------------------------|--|--|
| #1 | Supplemental Report Date: 03/23/2017 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 2 | 0 | <input type="checkbox"/> |
| CONDENSATE | 0 | 0 | <input type="checkbox"/> |
| PRODUCED WATER | 2 | 0 | <input type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs. | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): <u>30</u> | | Width of Impact (feet): <u>30</u> | |
| Depth of Impact (feet BGS): <u>6</u> | | Depth of impact (inches BGS): _____ | |
| How was extent determined? | | | |
| The extent was determined through visual observation. | | | |
| Soil/Geology Description: | | | |
| Bosler Sandy Loam | | | |
| Depth to Groundwater (feet BGS) <u>25</u> | | Number Water Wells within 1/2 mile radius: <u>18</u> | |
| If less than 1 mile, distance in feet to nearest | | Water Well <u>1713</u> None <input type="checkbox"/> | Surface Water _____ None <input checked="" type="checkbox"/> |
| | | Wetlands _____ None <input checked="" type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |
| | | Livestock _____ None <input checked="" type="checkbox"/> | Occupied Building <u>1558</u> None <input type="checkbox"/> |
| Additional Spill Details Not Provided Above: | | | |

The release had limited surface impacts. The total depth provided was based on the estimated depth of the flowline. Locates have been called and we will conduct assessment after locates clear. With the current storm there is now snow cover at the release site. The flowline has been shut in and an earthen berm has been constructed around the impacted area to prevent any runoff. A roustabout crew has been contacted and the line and impacted soil will be addressed as soon as possible.

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

| |
|--|
| |
|--|

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Brian Dodek

Title: Environmental Supervisor Date: 03/24/2017 Email: Bdodek@bonanzacrk.com

| COA Type | Description |
|----------|-------------|
| | |

Attachment Check List

| Att Doc Num | Name |
|-------------|------------------------------------|
| 401241313 | SPILL/RELEASE REPORT(SUPPLEMENTAL) |
| 401241734 | SITE MAP |
| 401245447 | FORM 19 SUBMITTED |

Total Attach: 3 Files

General Comments

| User Group | Comment | Comment Date |
|---------------|--|--------------|
| Environmental | Thanks for the response to previous COA's. | 03/28/2017 |

Total: 1 comment(s)

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Exhibit 3

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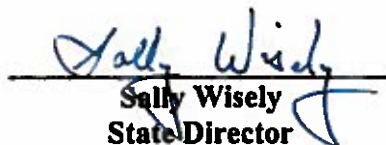
**United States Department of the Interior
Bureau of Land Management
Colorado State Office
Glenwood Springs Field office**

**Roan Plateau
Proposed Resource Management Plan
Amendment
and
Final Environmental Impact Statement**

Recommended by:


**Jamie E. Connell
Field Manager**

Approved by:


**Sally Wisely
State Director**

August 2006

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CHAPTER 2 • ALTERNATIVES

- Reduce the footprint of roads to the smallest safe standard.
- Implement dust suppression to minimize impacts to air, water, vegetation, and wildlife.
- Use appropriate color, shape, size, and location of surface facilities to reduce visual impacts.
- Install low-emission engines at compressor facilities to reduce air quality impacts.
- Use centralized or automated facilities to reduce the length and frequency of travel.
- Collocate utilities in common corridors and align them along roadways to reduce habitat loss and fragmentation.
- Incorporate powerline and pole or tower designs to minimize the risk of raptor electrocution.

In addition to these generally applicable measures, BLM may require BMPs intended for specific resources and situations. Examples include requirements to:

- Use culverts at stream crossings (culverts would have to be sized to avoid creating a barrier to along-stream movement of aquatic species or impede runoff conveyance of the channel).
- Use gravel or other surface material on roads, or use other dust-suppression techniques for the abatement of particulate emissions.
- Use protective fencing to exclude livestock from sensitive areas or areas being revegetated.
- Use biodegradable erosion blankets to stabilize disturbed soil and enhance revegetation.
- Seed with native species.
- Include native shrubs in reclamation seed mixes.
- Plant containerized shrubs during reclamation.

Where appropriate, these or other BMPs (Appendix I) would be specified at the time of permitting of oil and gas drilling or related operations (as COAs) or of other activities (e.g., range improvements, road reclamation, etc.). For oil and gas development, the potential for these requirements may be specified in the lease documents as LNs.

2.3 PROPOSED PLAN

This section summarizes the Proposed Plan resulting from BLM's response to public input and the Consultation and Coordination process. Although the term "Proposed Plan" is used throughout this Proposed Plan/Final EIS, it is more correctly referred to as the "Proposed Resource Management Plan Amendment." The term Proposed Plan is used as a type of shorthand and to avoid confusion with the Preferred Alternative (Alternative III) of the Draft RMPA/EIS.

In developing the Proposed Plan, BLM's intent was to increase the amount of environmental protection compared to the Preferred Alternative of the Draft RMPA/EIS while accommodating a comparable level of development of the underlying natural gas resource. Many of the specifics of the Proposed Plan incorporate revisions and refinements arising from the "Consultation and Coordination" process with State, county, and local governmental "Cooperating Agencies," following the public comment period for the Draft RMPA/EIS. The Consultation and Coordination process is described in Chapter 6.

Table 2-1 provides a detailed comparison of the resource and management components of the Proposed Plan in comparison to the No Action and Preferred Alternatives. Management of ACECs and the Parachute Creek WMA are summarized in Tables 2-2 and 2-3, respectively. Table 4-1 in Chapter 4 summarizes the level of oil and gas development expected, based on land availability and resource

CHAPTER 2 • ALTERNATIVES

management restrictions. Maps 1 and 2 depict the distribution of land availability and restrictions for the Proposed Plan, while Maps 3 through 12 provide analogous information for Alternatives I through V.

2.3.1 Emphasis on Phased and Clustered Development

An important aspect of the Proposed RMP Amendment is the incorporation of a requirement atop the plateau, and management emphasis below the rim, for phased and/or clustered oil and gas development, including extensive use of directional drilling to reduce surface disturbance. These requirements resulted from (1) comments by the public and Cooperating Agencies on the Draft RMPA/EIS that these measures could reduce surface disturbance, particularly in the more sensitive habitats atop the plateau, while allowing similar or greater recovery of oil and gas; and (2) experience of oil and gas operators in the region in both reducing the impacts and increasing the efficiency of drilling operations through greater use of multi-well pads and directional drilling.

During the Cooperating Agency process, the CDNR—which includes such agencies as the CDOW, CGS, Colorado Division of Parks, and COGCC—proposed a conceptual framework for implementing phased and clustered oil and gas development atop the plateau. The CDNR concept, which was viewed favorably by other participants in the Cooperating Agency process, was adopted and incorporated by BLM as a basic component of the Proposed Plan. Use of an undivided unit was intended to facilitate orderly development of the fluid mineral resource beneath the top of the plateau as a means of optimizing recovery of that resource while minimizing impacts to sensitive ecological and hydrological resources and encouraging rapid and effective reclamation. Major aspects of its adoption are as follows:

- Development Considerations. The maximum size of BLM oil and gas leases is 2,560 acres. The upper plateau area, with nearly 35,000 acres available for leasing, could contain at least 14 separate leases with an unknown number of separate operators. With separate leases there would be an incentive for each operator to maximize its own oil and gas production; simultaneous drilling operations across widely dispersed portions of the plateau, and redundant facilities for each operator. Economies of scale could more easily be met by distributing both costs and revenues associated with this environmentally sensitive area across the top of the plateau as a whole; while at the same time promoting development of all economically recoverable oil and gas resources within the Planning Area, rather than just those portions with the highest economic return.
- Federal Unit atop the Plateau. A lease stipulation would require participation in a Federal Unit for all leases issued on top of the plateau. In an undivided unit, all lessees have an interest in oil and gas production atop the plateau and share proportionately in the costs and revenues of oil and gas development. By eliminating competition among lessees, the Federal Unit would allow for more orderly development of the entire area and for consolidation of facilities and infrastructure by a single operator.
- Existing Leases. Because the area below the rim already has oil and gas development underway in the production area and adjacent private lands, new leasing within this portion of the Planning Area would not be subject to a stipulation requiring participation in a unit with undivided interest, but instead would continue to be leased as individual tracts and may be unitized on a voluntary basis or through forced pooling orders. Mandatory requirements for developing the top of the plateau in an environmentally sensitive manner may encourage use of many of the same approaches for areas below the cliffs.
- Phased Development. Requiring 100 percent participation in a Federal Unit would allow the top of the plateau to be developed in a phased or staged progression. Phased development would be achieved through sequencing the exploration and development operations conducted within six geographic areas, referred to as phased development areas (Figure 2-1). These six areas would be defined by the tops of ridges between the major drainages atop the plateau. Drilling and production would be allowed in only one geographic area at a time, providing an incentive to ensure that drilling

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CHAPTER 2 • ALTERNATIVES

is complete prior to moving to the next area. Exploratory wells may be drilled in other areas as needed to plan future drilling operations.

The six phased developed areas may be refined by BLM in collaboration with CDNR. Development in any new area would be predicated on substantial completion of diligent drilling in the preceding area sufficient to recover the oil and gas resource and satisfactory attainment of mitigation and interim reclamation requirements. For purposes of this document, it is assumed that exploration and development would occur first in the area immediately north of the Roan Cliffs, since this is the area closest in terms of horizontal distance to existing oil and gas development below the cliffs. [Generally, the closer an area is to a known reserve, the more likely it is to have the same conditions in the hydrocarbon-bearing strata.] Only when the first development area is nearing full development would BLM allow the operator to move to the next development area. Thus, impacts related to direct habitat loss, vehicular traffic, drill rig operation, and other sources would be limited to only one portion of the upper plateau at any given time.

The concept of phased and clustered development was discussed in the Draft RMPA/EIS. The Proposed Plan further refines this concept to as a way to ensure orderly development across the top of the plateau. Of particular importance in developing a phased approach to development was the desire to reduce impacts to wildlife by leaving large portions of the plateau relatively unaffected until reclamation had been completed in previously disturbed areas.

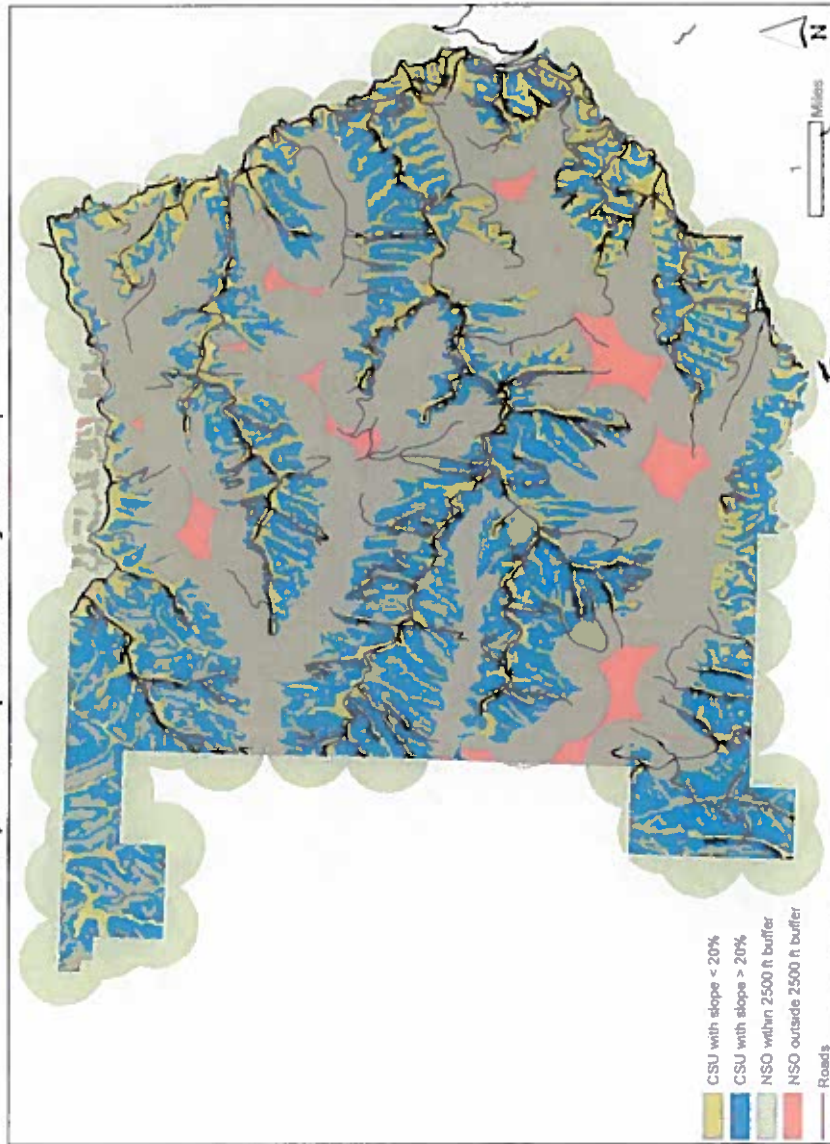
- Clustered Development and Directional Drilling. Another component of the Proposed Plan is the requirement for using directional drilling and multiple well pads on top of the plateau to reduce the surface disturbance footprint and landscape fragmentation. Discussions with CDNR and industry representatives indicate that, with existing proven technology, directionally drilled wells could “reach” a horizontal distance of 2,500 feet to access hydrocarbon resources. The Proposed Plan requires that pads atop the plateau be separated by a minimum distance of 2,640 feet (0.5 mile) within areas where disturbance would be allowed. With 10-acre downhole spacing for Mesaverde formation wells and 160-acre spacing for Wasatch wells, this would result in sixteen Mesaverde wells and one or more Wasatch wells per pad. Some minor variation to the minimum separation distance could be authorized.

An additional component of clustered development as proposed by CDNR is to focus development along ridgetops. The top of the plateau is characterized by relatively flat ridges separated by relatively steep stream valleys. Focusing development on ridgetops would reduce impacts to the ecologically and hydrologically sensitive drainages. Through Geographic Information System (GIS) analysis, areas of drainage divides with slopes of 20 percent or less were found to be a reasonable basis for defining “ridgetops.”

GIS was then used to systematically project hypothetical locations of pads meeting the criteria of a minimum separation of 0.5 mile, in non-NGD/NSO areas, and with slopes of 20 percent or less. By applying a 2,500-foot horizontal reach for directional drilling to the hypothetical pad locations, GIS analysis indicates that more than 95 percent of the area of hydrocarbon-bearing formations beneath the upper plateau could be accessed at full-field development. This includes more than 90 percent in areas with an NGD/NSO restriction. Since the NGD/NSO areas atop the plateau under the Proposed Plan are relatively narrow features (associated with the stream drainage pattern) (Map 2), pads located near the edges of the NGD/NSOs would allow directional drilling to access the entire underlying area in most cases. If drilling technology develops to allow a greater horizontal reach, recovery beneath the NGD/NSO areas could be higher, potentially allowing surface density to be reduced further.

Clustered development would not only reduce surface impacts due to fewer pads, it would also reduce the need for new roads and vehicular travel associated with operation and maintenance of the wells.

Slope and Stipulation Analysis - Proposed Plan



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